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TECHNICAL MEMORANDUM

2007 Storm-Water Sampling

Fred Devine Diving & Salvage, Co.

6211 N. Ensign Street

Portland, Oregon 97217

January 14, 2008

Prepared for:

The Marine Salvage Consortium, Inc.

(dba Fred Devine Diving & Salvage, Co.)

Prepared by:



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Project No. 521-07001-02

TECHNICAL MEMORANDUM

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Portland, Oregon 97217

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This technical memorandum has been prepared by EVREN Northwest, Inc. for The Marine Salvage Consortium, Inc.

Project No. 521-07001-02

By

Neil M. Woller, R.G., Senior Hydrogeologist

And

Lynn D. Green, Principal

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C	Electronic Data Disk

TECHNICAL MEMORANDUM

2007 Storm-Water Sampling

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6211 N. Ensign Street

Portland, Oregon 97217

1.0 INTRODUCTION

Storm-water sampling was conducted at the above-referenced site (Figure 1) in accordance with the Oregon State Department of Environmental Quality (ODEQ)-approved *Storm Water Source Control Evaluation Work Plan*.¹ This technical memorandum presents and discusses storm-water sampling conducted on **November 16 and November 28, 2007** as specified by Section 7.0 of the *Work Plan*.

As outlined in the *Work Plan*, catch basin sediment is also to be collected and analyzed at the site prior to routine cleaning of the catch basins, once appreciable sediment has accumulated in the sumps of the catch basins. Catch basin sediment screening is intended to precede storm-water screening, so that analytical results from the catch basin sediment screening can be used to help develop and refine the site-specific storm water analytical suite. Prior to both the November 16 and November 28, 2007 storm-water sampling events, sediment accumulation in each catch basin was measured and evaluated. Sediment measurements indicated that insufficient sediment accumulation was present to sample (<1 inch in most catch basins); therefore, sediment sampling was not conducted at the site as part of the sampling events described herein.

2.0 REGULATORY FRAMEWORK

The Portland Harbor Joint Source Control Strategy (JSCS) was jointly developed by the U.S. Environmental Protection Agency (EPA) and ODEQ and provides the criteria by which work at the subject site must be completed within the framework of applicable state and federal

¹ EVREN Northwest, Inc. June 26, 2007. *Storm Water Source Control Evaluation Work Plan*. Approved in an e-mail by ODEQ on October 11th, 2007.

regulations, including Oregon Administrative Rules (OAR) Chapter 340 Division 122 (Hazardous Substance Remedial Action Rules).

3.0 EVALUATION OF STORM-EVENT CRITERIA

As required by the JSCS, the following criteria were employed in the selection of storm events during which storm water samples were collected.

- Antecedent dry period of at least 24 hours (as defined by <0.1 inch of precipitation over the previous 24 hours).
- Minimum predicted rainfall volume of >0.2 inch per storm event.
- Expected duration of storm event of at least three (3) hours.

3.1 Antecedent Dry Period

The antecedent dry period was evaluated using City of Portland Hydra Rainfall Network rain gauge 204 data.² For the November 16, 2007 event, the antecedent dry period was 80 hours. For the November 28, 2007 event, the antecedent dry period was 41 hours.

3.2 Storm Rainfall Volume

Both storm events were predicted to have greater than 0.2 inches of rainfall. Actual rainfall data obtained from the City of Portland Hydra Rainfall Network were 0.62 inches for November 16, 2007, and 0.40 inches on November 28, 2007.

3.3 Storm Duration

Both storm events were predicted to last longer than three (3) hours. Actual storm durations obtained from City of Portland Hydra Rainfall Network were 12 and 9 hours, respectively, for the November 16 and 28, 2007, events.

4.0 METHODS AND PROCEDURES

This section documents the methods and procedures used to collect and analyze storm water samples; monitoring event results are presented in the next section. Field sampling data sheets are presented in Attachment A.

² Rain-gauge data from: http://or.water.usgs.gov/non-usgs/bes/raingage_info/clickmap.html (Station number 204, which corresponds to a rain gauge located on Swan Island.)

4.1 Storm-Water Sample Collection

As specified in the *Work Plan*¹, EVREN Northwest, Inc. (ENW) personnel collected grab samples representative of storm-water discharge from a manhole located between Catch Basins #5 and #6, prior to where storm water from the site enters the City of Portland storm sewer line. It is believed that this location will be most representative of storm-water discharge leaving the site and entering the City of Portland Storm Sewer Line. This manhole has been informally designated Sampling Point SP01 (see attached site diagram, Figure 2).

Prior to collection, all collection tools were decontaminated using a sequential wash of Alconox® solution, tap water from the City of Portland municipal water system, and finally with deionized water. Fresh nitrile gloves were worn during sample collection. Storm-water samples were placed in appropriate, laboratory-supplied, sample containers and labeled with project name, sample name, date and time of collection, name of sampler, analysis required, and preservation. The samples were then immediately placed in cooled storage until they were delivered to the laboratory under chain-of-custody protocols.

4.2 Analytical Methods

ENW submitted the storm water samples to Friedman & Bruya, Inc. (F&BI) of Seattle, Washington, for analyses according to Table 4-1.

Table 4-1. Analytical Methods

Analyte(s)	Analytical Method
Selected Metals (Total): Cd, Cu, Cr, Ni, Pb, Zn	EPA Method 200.8
Total Petroleum Hydrocarbons (TPH) - Hydrocarbon Identification / Diesel-Range Extended (DRO)	NWTPH-Dx
Polynuclear aromatic hydrocarbons and phthalates (PAHs)	EPA 8270C SIM
Polychlorinated biphenyls (PCBs)	EPA 8082
Total Suspended Solids (TSS)	Standard Method 2540D

5.0 STORM-WATER SAMPLING RESULTS

ENW collected storm-water samples on November 16 and November 28, 2007. Storm-water parameters were recorded at the time of sample collection; in addition, the laboratory performed analysis for Total Suspended Solids (TSS) as an additional control to evaluate the analytical data upon completion of this investigation. Parameter results are presented in Table 5-1.

Table 5-1. Field Parameters

Date	Sample	Time	Temperature (°C)	Conductivity (mS/cm)	Dissolved Oxygen (mg/L)	pH	Redox Potential (mV)	Total Suspended Solids (mg/L)	Visual/olfactory Notes
11/16/2007	SP01-071116	7:30	10.91	190	98.1	7.00	27	16.4	Slightly turbid
11/28/2007	SP-1	15:00	9.82	145	76.2	7.18	48	43.6	Turbid

°C = degrees Celsius.

mV = millivolts.

mS/cm = microsiemens per centimeter.

NA = not analyzed.

mg/L = milligrams per Liter or parts per million.

NT = not tested

All parameters were within the normal ranges.

Table 1 (behind text) shows analytical results, units of measurement, compounds detected, Method Detection Limits (MDLs), and Screening-Level Values (SLVs). Copies of the laboratory reports and chain-of-custody documentation are included as Attachment B. This data is also presented in the electronic disk attached to this report (Attachment C).

The rest of this section discusses detected compounds.

5.1 November 16, 2007

The following compounds were detected in the storm-sample collected November 16, 2007:

Compounds detected above their JSCS SLV:

- Copper
- Lead
- Zinc

Compounds detected below their JSCS SLV or no SLV established:

- Metals chromium and nickel
- DRO (diesel-range organics)³
- RRO (residual-range organics)

³ The laboratory flag indicated chromatogram pattern was not indicative of diesel.

5.2 November 28, 2007

The following compounds were detected in the storm-sample collected November 28, 2007:

Compounds detected above their JSCS SLV:

- Metals cadmium, copper, lead, and zinc
- Bis[2-ethylhexyl]phthalate
- The following PAHs: phenanthrene, fluoranthene, pyrene, benzo[b]fluoranthene, chrysene, benzo[k]fluoranthene, benz[a]anthracene, benzo[a]pyrene, and indeno[1,2,3-c,d]pyrene

Compounds detected below their JSCS SLV or no SLV established:

- Metals chromium and nickel
- The following PAHs: naphthalene, fluorine, anthracene, and benzo[g,h,i]perylene
- DRO
- RRO

5.3 Persistent Bioaccumulative and Toxic (PBT) Chemicals Detected

ENW accessed the EPA list of persistent bioaccumulative and toxic (PBT) chemicals to identify detected storm-water constituents on the list. The following detected constituents are listed as PBTs:

Category Name

Polycyclic aromatic compounds (PACs)

Chemical Name (Individual)

Lead

Benzo[g,h,i]perylene

6.0 EVALUATION OF ANALYTICAL DATA IN THE CONTEXT OF HYDROLOGICAL CONDITIONS

As recommended by the JSCS, four "grab sample" storm water sampling events are to be conducted during this evaluation; two (2) of these sampling events should be representative of "first flush" conditions (i.e., within the first 30 minutes of storm water discharge); the remaining two (2) should be conducted within the first three hours of storm water discharge, to the extent practicable. The two (2) sampling events discussed in this technical memo are representative of 'first flush' conditions, and are therefore interpreted to be the 'worst case' sampling results. Upon completion of the remaining two (2) sampling events, evaluation of all storm-water data will be completed, and a more complete picture of storm water discharge will be presented.

The rest of this section evaluates the analytical data in the context of the hydrological conditions surrounding each storm event.

6.1 November 16, 2007, Sampling Event

The November 16, 2007, sampling event followed a relatively long period of good weather associated with the end of the dry season. Only two days in the preceding portion of the month had precipitation exceeding 0.1 inch, with the higher rainfall recorded at 0.19 inch on November 9, 2007.

6.2 November 28, 2007, Sampling Event

The November 28, 2007, sampling event followed two days of rainfall: two days prior was a 0.33-inch rainfall event and on the preceding day 0.08 inch had fallen. Large rainfall events were also recorded on the days immediately following this sampling event. Therefore the November 28, 2007, event appears to have coincided with the onset of the Oregon wet season. Correspondingly, the TSS concentration had risen to over 2.6-times the TSS of the previous sampling event.

7.0 REMAINING TASKS TO BE COMPLETED

Remaining tasks to be completed, as outlined in the *Work Plan*¹, include.

- Assessment and evaluation of sediment in catch basins.
- Assessment of non-storm event discharge, if any.
 - An additional storm water inspection will take place during a period of sustained dry weather to determine in non-storm water flows discharge from the site to the City outfall M-1.
- Sampling of storm water during sustained storm-water discharge (during first three hours of discharge).
- Evaluation of all storm water and sediment results collected as part of the approved scope of work detailed in the *Work Plan*.

8.0 LIMITATIONS

The scope of this report is limited to observations made during on-site work; interviews with knowledgeable sources, public agency personnel, and contractors licensed in the state of Oregon; and review of readily available published and unpublished reports and literature. As a result, these conclusions are based on information supplied by others as well as interpretations by qualified parties.

There is no practice that is thorough enough to absolutely identify all hazardous substances that may be present at a given site. No sampling program can thoroughly identify all variations in contaminant distribution. ENW's investigation has been focused only on the issue that was specifically identified in the scope of work. Therefore, if contamination other than that specifically mentioned is present and not identified as part of a limited scope of work (SOW), ENW's environmental investigation shall not be construed as a guarantee of the absence of such materials.

ENW performed this study under a limited scope of services, per our agreement. It is possible, despite the use of reasonable care and interpretation, that ENW may have failed to identify regulation violations related to the presence of hazardous substances other than those specifically mentioned in the SOW. ENW assumes no responsibility for conditions that it did not specifically evaluate or conditions that were not generally recognized as environmentally unacceptable at the time this report was prepared.

TABLE

Table 1 - COPCs and Screening Levels for Storm Water

Location ID		SP01		SP01		Lowest JSCS Screening Value
Sample ID		SP01-071116		SP-1		
Date Sampled		11/16/2007		11/28/2007		
		Concentration	Method Detection Limit	Concentration	Method detection Limit	
Constituent of Interest	Note	µg/L (ppb)	µg/L (ppb)	µg/L (ppb)	µg/L (ppb)	µg/L (ppb)
Phthalate Esters						
Di-n-butylphthalate		<1 (ND)	1	<0.5 (ND)	0.5	3
Bis[2-ethylhexyl]phthalate	c, nv	<10 (ND)	10	2.9	0.5	0.22
Polyaromatic Hydrocarbons						
Naphthalene	nc, v	<1 (ND)	1	0.15	0.05	0.2
Acenaphthylene	nc, v	<1 (ND)	1	<0.05 (ND)	0.05	0.2
Acenaphthene	c, nv	<1 (ND)	1	<0.05 (ND)	0.05	0.2
Fluorene	c, nv	<1 (ND)	1	0.11	0.05	0.2
Phenanthrene	c, nv	<1 (ND)	1	0.52	0.05	0.2
Anthracene	c, nv	<1 (ND)	1	0.053	0.05	0.2
Fluoranthene	nc, nv	<1 (ND)	1	0.45	0.05	0.2
Pyrene	c, nv	<1 (ND)	1	0.38	0.05	0.2
Benzo[a]anthracene	c, nv	<1 (ND)	1	0.14	0.05	0.0018
Chrysene	nc, nv	<1 (ND)	1	0.30	0.05	0.0018
Benzo[b]fluoranthene	nc, v	<1 (ND)	1	0.26	0.05	0.0018
Benzo[k]fluoranthene	c, nv	<1 (ND)	1	0.081	0.05	0.0018
Benzo[a]pyrene	c, nv	<1 (ND)	1	0.15	0.05	0.0018
Indeno[1,2,3-cd]pyrene	c, nv	<1 (ND)	1	0.15	0.05	0.0018
Dibenz[a,h]anthracene	c, nv	<1 (ND)	1	<0.05 (ND)	0.05	0.0018
Benzo[g,h,i]perylene	nc, nv	<1 (ND)	1	0.15	0.05	0.2
Polychlorinated Biphenyls (PCBs)						
Aroclor 1016	c, nv	<0.1 (ND)	0.1	<0.07 (ND)	0.07	0.96
Aroclor 1221	c, nv	<0.1 (ND)	0.1	<0.07 (ND)	0.07	0.28
Aroclor 1232	c, nv	<0.1 (ND)	0.1	<0.07 (ND)	0.07	0.58
Aroclor 1242	c, nv	<0.1 (ND)	0.1	<0.07 (ND)	0.07	0.053
Aroclor 1248	c, nv	<0.1 (ND)	0.1	<0.07 (ND)	0.07	0.081
Aroclor 1254	c, nv	<0.1 (ND)	0.1	<0.07 (ND)	0.07	0.033
Aroclor 1260	c, nv	<0.1 (ND)	0.1	<0.07 (ND)	0.07	94
Aroclor 1262	c, nv	<0.1 (ND)	0.1	<0.07 (ND)	0.07	NE
Metals						
Cadmium	c, nv	<1 (ND)	1	1.34	1	0.094
Chromium (total)	nc, nv	1.92	1	5.32	1	100
Copper	c, nv	21.7	1	74.1	1	2.7
Lead	nc, nv	8.84	1	25.4	1	0.54
Nickel	nc, nv	2.16	1	5.22	1	NE
Zinc	nc, nv	321	1	467	1	33
Total Petroleum Hydrocarbons						
GRO	nc, v	<200 (ND)	200	—	—	100
DRO	nc, nv	310	50	650	50	NE
RRO	nc, nv	590	250	1100	250	NE

Notes:

ND = not detected at or above laboratory method reporting limits

NE = not established.

µg/L = micrograms per Liter

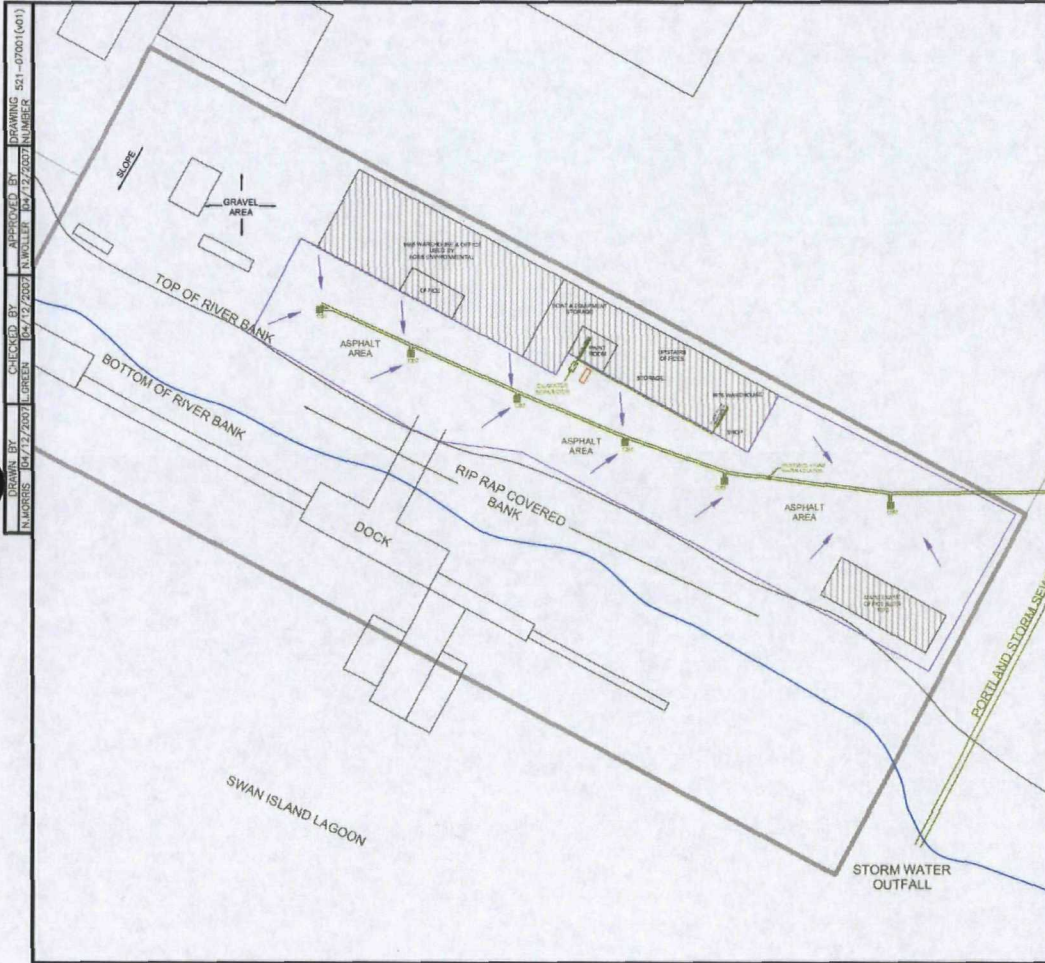
GRO = gasoline-range organics.

DRO = diesel-range organics.

RRO = residual-range organics.

JSCS = Portland Harbor Joint Source Control Strategy, ODEQ and EPA, December 2005

FIGURES



ATTACHMENT A FIELD DATA SHEETS



EVRENNORTHWEST
environmental natural resource consultants

FIELD SAMPLING DATA SHEET

PO Box 80747

Portland, Oregon, 97280-1747

503-452-5561 Fax: 503-452-7669

Office: (503) 692-8118 Fax: (503) 885-9702

PROJECT NAME: FRED DEVINE

LOCATION: SPO1

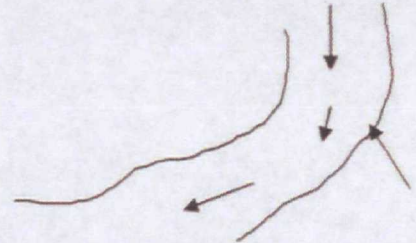
SITE ADDRESS: P 521-06001-02

LABEL CODE:

WIND FROM: N NE E SE S SW W NW LIGHT MEDIUM HEAVY
WEATHER: SUNNY CLOUDY RAIN HARD ? TEMPERATURE: °F 45 °C

SAMPLE LOCATION DESCRIPTION

LA SP 01, NCA CBS
LA MINUTEC, ~ 6' DRED



5 METHODS: (A) Submersible Pump (B) Peristaltic Pump (C) Disposable Bailer (D) PVC/Teflon Bailer (E) Dedicated Bailer (F) Dedicated Pump (G) Other = WAB

GROUNDWATER SAMPLING DATA (if product is detected, do NOT sample)								Sample Depth: <u>SW</u>	[✓ if used]
Bottle Type	Date	Time	Method ⁵	Amount & Volume mL	Preservative [circle]	Ice	Filter	pH	✓
VOA Glass	/ /	:		3 40 ml	HCl	YES	NO		
Amber Glass	11/16/07	7:30	6	32 250, 500, 1L	(None) (HCl) (H ₂ SO ₄)	YES	NO		✓
White Poly	11/16/07	7:30	6	1 250, 500, 1L	None	YES	NO	NA	✓
Yellow Poly	/ /	:		250, 500, 1L	H ₂ SO ₄	YES	NO		
Green Poly	/ /	:		250, 500, 1L	NaOH	YES	NO		
Red Total Poly	11/16/07	7:30	6	1 250, 500, 1L	(HNO ₃)	YES	NO		✓
Red Diss. Poly	/ /	:		250, 500, 1L	HNO ₃	YES	YES		
	/ /	:		250, 500, 1L		YES			

White no acid, Yellow H₂SO₄, Red HNO₃

Total Bottles (include duplicate count):

Analysis Allowed per Bottle Type	BOTTLE TYPE	TYPICAL ANALYSIS ALLOWED PER BOTTLE TYPE (Circle applicable or write non-standard analysis below)
	VOA - Glass	(8010) (8010/8020) (8020) (8240) (8260) (BTEX) (TPH-G) (BTEX/TPH-G) OR [] WA []
	AMBER - Glass	(PAH) (TPH-HClD) (TPH-D) (TPH-418.1) (Oil & Grease) <u>2708 PCBs</u> OR [X] WA []
	WHITE - Poly	(pH) (Conductivity) (TDS) (TSS) (BOD) (Turbidity) (Alkalinity) (HCO ₃ /CO ₂) (Cl) (SO ₄) (NO ₃) (NO ₂) (F)
	YELLOW - Poly	(COD) (TOC) (Total P _K) (Total Kjeldahl Nitrogen) (NH ₄) (NO ₃ /NO ₂)
	GREEN - Poly	(Cyanide)
	RED TOTAL - Poly	(As) (Sb) (Ba) (Be) (Cd) (Co) (Cr) (Cu) (Fe) (Pb) (Mg) (Mn) (Ni) (Ag) (Se) (Ti) (V) (Zn) (Hg) (K) (Na)
	RED DISSOLVED - Poly	(As) (Sb) (Ba) (Be) (Ca) (Cd) (Co) (Cr) (Cu) (Fe) (Pb) (Mg) (Mn) (Ni) (Ag) (Se) (Ti) (V) (Zn) (Hg) (K) (Na) (Hardness) (Silica)

WATER QUALITY DATA			Purge Start Time: 07:45			ORP	Pump/Bailer Inlet Depth:	
Meas.	Method ⁵	Purged (gal)	pH	E Cond (µS)	°F Temp (°C)	Other	Diss O ₂ (mg/l)	Water Quality
4		NA	7.00	190	10.91	27	98.1	SI TURBID
3	
2	
1	
0		0.00	.	.	.	.	.	.

[Casing] [Select A-G] [Cumulative Totals]

[Circle units]

[Clarity, Color]

SAMPLER:

Lynn Green
(PRINTED NAME)

(SIGNATURE)



FIELD SAMPLING DATA SHEET

PO Box 80747

Portland, Oregon, 97280-1747

503-452-5561 Fax: 503-452-7669

Office: (503) 692-8118

Fax: (503) 885-9702

PROJECT NAME: Fred Devine

LOCATION:

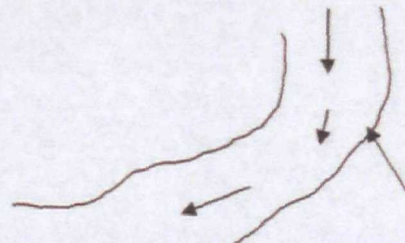
SITE ADDRESS: 521-07001-02

LABEL CODE:

WIND FROM: N NE E SE S SW W NW LIGHT MEDIUM HEAVY
WEATHER: SUNNY CLOUDY RAIN ? TEMPERATURE: 38 °C

SAMPLE LOCATION DESCRIPTION

5201



§ METHODS: (A) Submersible Pump (B) Peristaltic Pump (C) Disposable Bailer (D) PVC/Teflon Bailer (E) Dedicated Bailer (F) Dedicated Pump (G) Other =

GROUNDWATER SAMPLING DATA (if product is detected, do NOT sample)

Sample Depth:

[✓ if used]

Bottle Type	Date	Time	Method §	Amount & Volume mL	Preservative [circle]	Ice	Filter	pH	✓
VOA Glass	/ /	:		3 40 ml	HCl	YES	NO		
Amber Glass	11/28/07	15:00	3	250, 500, 1L	(None) (HCl) (H ₂ SO ₄)	YES	NO		✓
White Poly	11/28/07	15:00	1	250, 500, 1L	None	YES	NO	NA	✓
Yellow Poly	/ /	:		250, 500, 1L	H ₂ SO ₄	YES	NO		
Green Poly	/ /	:		250, 500, 1L	NaOH	YES	NO		
Red Total Poly	11/28/07	15:00	1	250, 500, 1L	HNO ₃	YES	NO		✓
Red Diss. Poly	/ /	:		250, 500, 1L	HNO ₃	YES	YES		
	/ /	:		250, 500, 1L		YES			

White no acid, Yellow H₂SO₄, Red HNO₃

Total Bottles (include duplicate count):

Analysis Allowed per Bottle Type	BOTTLE TYPE	TYPICAL ANALYSIS ALLOWED PER BOTTLE TYPE (Circle applicable or write non-standard analysis below)
VOA - Glass	(8010) (8010/8020) (8020) (8240) (8260) (BTEX) (TPH-G) (BTEX/PPH-G)	OR [] WA []
AMBER - Glass	(PAH) (TPH-HClD) (TPH-L) (TPH-418.1) (Oil & Grease) (5201) (PUBS)	OR [] WA []
WHITE - Poly	(pH) (Conductivity) (TDS) (TSS) (BOD) (Turbidity) (Alkalinity) (HCO ₃ CO ₃) (Cl) (SO ₄) (NO ₃) (NO ₂) (F)	
YELLOW - Poly	(COD) (TOC) (Total P ₀₄) (Total Kjeldahl Nitrogen) (NH ₄) (NO ₃ /NO ₂)	
GREEN - Poly	(Cyanide)	
RED TOTAL - Poly	(As) (Sb) (Ba) (Be) (Ca) (Cd) (Co) (Cr) (Cu) (Fe) (Pb) (Mg) (Mn) (Ni) (Ag) (Se) (Ti) (V) (Zn) (Hg) (K) (Na)	
RED DISSOLVED - Poly	(As) (Sb) (Ba) (Be) (Ca) (Cd) (Co) (Cr) (Cu) (Fe) (Pb) (Mg) (Mn) (Ni) (Ag) (Se) (Ti) (V) (Zn) (Hg) (K) (Na) (Hardness) (Silica)	

WATER QUALITY DATA

Purge Start Time:

ORP

Pump/Bailer Inlet Depth:

Meas.	Method §	Purged (gal)	pH	E Cond (µS)	°F Temp (°C)	Other	Diss O ₂ (mg/l)	Water Quality
4		-	7.18	145	9.22	48	76.2	Turbid
3	
2	
1	
0		0.00	.	.	.	.	.	.

[Casing] [Select A-G] [Cumulative Totals]

[Circle units]

[Clarity, Color]

SAMPLER:

Mike Krzeminski

(PRINTED NAME)

(SIGNATURE)

ATTACHMENT B LABORATORY ANALYTICAL REPORTS

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Charlene Morrow, M.S.
Yelena Aravkina, M.S.
Bradley T. Benson, B.S.
Kurt Johnson, B.S.

3012 16th Avenue West
Seattle, WA 98119-2029
TEL: (206) 285-8282
FAX: (206) 283-5044
e-mail: fbi@isomedia.com

December 17, 2007

Lynn Green, Project Manager
Evren Northwest, Inc.
PO Box 80747
Portland, OR 97280

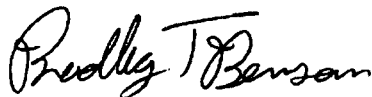
Dear Mr. Green:

Included are the results from the testing of material submitted on November 29, 2007 from the Fred Devine Salvage 521-07001-01, F&BI 711369 project. There are 17 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

We appreciate this opportunity to be of service to you and hope you will call if you should have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.



Bradley T. Benson
Chemist

Enclosures

c: Neil Wohlers, Mike Krzeminski
ENW1217R.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

This case narrative encompasses samples received on November 29, 2007 by Friedman & Bruya, Inc. from the Evren Northwest, Inc. 521-07001-01, F&BI 711369 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID
711369-01

Evren Northwest, Inc.
SP-1

The 8270C surrogate Nitrobenzene-d5 exceeded the laboratory acceptance criteria. No compounds associated with this surrogate were detected, therefore the data is acceptable. The 8270C 4-chloroaniline relative percent difference for the laboratory control spike failed the acceptance criteria. The compound was not detected in the samples, therefore the data is acceptable.

The 8082 method blank surrogate failed below the acceptance criteria. The data is flagged accordingly. The 8082 Aroclor 1016 relative percent difference for the laboratory control spike failed the acceptance criteria. The compound was not detected in the samples, therefore the data is acceptable.

All other quality control requirements were acceptable.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 12/17/07
Date Received: 11/29/07
Project: 521-07001-01, F&BI 711369
Date Extracted: 11/29/07
Date Analyzed: 12/04/07

**RESULTS FROM THE ANALYSIS OF THE WATER SAMPLES
FOR TOTAL PETROLEUM HYDROCARBONS AS
DIESEL AND RESIDUAL RANGE
USING METHOD NWTPH-Dx
Results Reported as ug/L (ppb)**

<u>Sample ID</u> Laboratory ID	<u>Diesel Range</u> (C ₁₀ -C ₂₅)	<u>Residual Range</u> (C ₂₅ -C ₃₆)	<u>Surrogate</u> <u>(% Recovery)</u> (Limit 51-132)
SP-1 711369-01	650	1,100	75
Method Blank	<50	<250	76

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 200.8

Client ID:	SP-1	Client:	Evren Northwest, Inc.
Date Received:	11/29/07	Project:	521-07001-01, F&BI 711369
Date Extracted:	12/06/07	Lab ID:	711369-01
Date Analyzed:	12/07/07	Data File:	711369-01.010
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	HR

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	98	60	125
Indium	89	60	125
Bismuth	99	60	125

Analyte:	Concentration ug/L (ppb)
Chromium	5.32
Nickel	5.22
Copper	74.1
Zinc	457
Cadmium	1.34
Lead	25.4

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 200.8

Client ID:	Method Blank	Client:	Evren Northwest, Inc.
Date Received:	NA	Project:	521-07001-01, F&BI 711369
Date Extracted:	12/06/07	Lab ID:	I7-459 mb
Date Analyzed:	12/07/07	Data File:	I7-459 mb.008
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	HR

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	104	60	125
Indium	102	60	125
Bismuth	105	60	125

Analyte:	Concentration ug/L (ppb)
Chromium	<1
Nickel	<1
Copper	<1
Zinc	<1
Cadmium	<1
Lead	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Semivolatile Compounds By EPA Method 8270C SIM

Client Sample ID:	SP-1	Client:	Evren Northwest, Inc.
Date Received:	11/29/07	Project:	521-07001-01, F&BI 711369
Date Extracted:	11/29/07	Lab ID:	711369-01
Date Analyzed:	12/06/07	Data File:	120529.D
Matrix:	Water	Instrument:	GCMS6
Units:	ug/L (ppb)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Anthracene-d10	90	50	150
Benzo(a)anthracene-d12	85	50	150

Compounds:	Concentration ug/L (ppb)
Naphthalene	0.15
Acenaphthylene	<0.05
Acenaphthene	<0.05
Fluorene	0.11
Phenanthrene	0.52
Anthracene	0.053
Fluoranthene	0.45
Pyrene	0.38
Benz(a)anthracene	0.14
Chrysene	0.30
Benzo(a)pyrene	0.15
Benzo(b)fluoranthene	0.26
Benzo(k)fluoranthene	0.081
Indeno(1,2,3-cd)pyrene	0.15
Dibenz(a,h)anthracene	<0.05
Benzo(g,h,i)perylene	0.15

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Semivolatile Compounds By EPA Method 8270C SIM

Client Sample ID:	Method Blank	Client:	Evren Northwest, Inc.
Date Received:	Not Applicable	Project:	521-07001-01, F&BI 711369
Date Extracted:	11/29/07	Lab ID:	071923mb2
Date Analyzed:	12/06/07	Data File:	120521.D
Matrix:	Water	Instrument:	GCMS6
Units:	ug/L (ppb)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Anthracene-d10	94	50	150
Benzo(a)anthracene-d12	83	50	150

Compounds:	Concentration ug/L (ppb)
Naphthalene	<0.05
Acenaphthylene	<0.05
Acenaphthene	<0.05
Fluorene	<0.05
Phenanthrene	<0.05
Anthracene	<0.05
Fluoranthene	<0.05
Pyrene	<0.05
Benz(a)anthracene	<0.05
Chrysene	<0.05
Benzo(a)pyrene	<0.05
Benzo(b)fluoranthene	<0.05
Benzo(k)fluoranthene	<0.05
Indeno(1,2,3-cd)pyrene	<0.05
Dibenz(a,h)anthracene	<0.05
Benzo(g,h,i)perylene	<0.05

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Semivolatile Compounds By EPA Method 8270C

Client Sample ID: SP-1
 Date Received: 11/29/07
 Date Extracted: 12/05/07
 Date Analyzed: 12/06/07
 Matrix: Water
 Units: ug/L (ppb)

Client: Evren Northwest, Inc.
 Project: 521-07001-01, F&BI 711369
 Lab ID: 711369-01
 Data File: 120608A.D
 Instrument: GCMS3
 Operator: YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	61	23	77
Phenol-d6	36	10	63
Nitrobenzene-d5	114 vo	58	113
2-Fluorobiphenyl	108	57	111
2,4,6-Tribromophenol	73	40	105
Terphenyl-d14	108	34	129

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Phenol	<5	3-Nitroaniline	<1.5
Bis(2-chloroethyl) ether	<0.5	Acenaphthene	<0.5
2-Chlorophenol	<5	2,4-Dinitrophenol	<15
1,3-Dichlorobenzene	<0.5	Dibenzofuran	<0.5
1,4-Dichlorobenzene	<0.5	2,4-Dinitrotoluene	<0.5
1,2-Dichlorobenzene	<0.5	4-Nitrophenol	<5
Benzyl alcohol	<0.5	Diethyl phthalate	<0.5
Bis(2-chloroisopropyl) ether	<0.5	Fluorene	<0.5
2-Methylphenol	<5	4-Chlorophenyl phenyl ether	<0.5
Hexachloroethane	<0.5	N-Nitrosodiphenylamine	<0.5
N-Nitroso-di-n-propylamine	<0.5	4-Nitroaniline	<5
4-Methylphenol	<5	4,6-Dinitro-2-methylphenol	<15
Nitrobenzene	<0.5	4-Bromophenyl phenyl ether	<0.5
Isophorone	<0.5	Hexachlorobenzene	<0.5
2-Nitrophenol	<5	Pentachlorophenol	<5
2,4-Dimethylphenol	<5	Phenanthrene	<0.5
Benzoic acid	<50	Anthracene	<0.5
Bis(2-chloroethoxy)methane	<0.5	Carbazole	<0.5
2,4-Dichlorophenol	<5	Di-n-butyl phthalate	<0.5
1,2,4-Trichlorobenzene	<0.5	Fluoranthene	<0.5
Naphthalene	<0.5	Pyrene	<0.5
Hexachlorobutadiene	<0.5	Benzyl butyl phthalate	0.59
4-Chloroaniline	<1.5	Benz(a)anthracene	<0.5
4-Chloro-3-methylphenol	<5	Chrysene	<0.5
2-Methylnaphthalene	<0.5	Bis(2-ethylhexyl) phthalate	2.9
Hexachlorocyclopentadiene	<1.5	Di-n-octyl phthalate	<0.5
2,4,6-Trichlorophenol	<5	Benzo(a)pyrene	<0.5
2,4,5-Trichlorophenol	<5	Benzo(b)fluoranthene	<0.5
2-Chloronaphthalene	<0.5	Benzo(k)fluoranthene	<0.5
2-Nitroaniline	<0.5	Indeno(1,2,3-cd)pyrene	<0.5
Dimethyl phthalate	<0.5	Dibenz(a,h)anthracene	<0.5
Acenaphthylene	<0.5	Benzo(g,h,i)perylene	<0.5
2,6-Dinitrotoluene	<0.5		

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Semivolatile Compounds By EPA Method 8270C

Client Sample ID: Method Blank	Client: Evren Northwest, Inc.
Date Received: Not Applicable	Project: 521-07001-01, F&BI 711369
Date Extracted: 12/05/07	Lab ID: 071962mb
Date Analyzed: 12/06/07	Data File: 120607.D
Matrix: Water	Instrument: GCMS3
Units: ug/L (ppb)	Operator: YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	52	23	77
Phenol-d6	32	10	63
Nitrobenzene-d5	96	58	113
2-Fluorobiphenyl	91	57	111
2,4,6-Tribromophenol	56	40	105
Terphenyl-d14	96	34	129

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Phenol	<5	3-Nitroaniline	<1.5
Bis(2-chloroethyl) ether	<0.5	Acenaphthene	<0.5
2-Chlorophenol	<5	2,4-Dinitrophenol	<15
1,3-Dichlorobenzene	<0.5	Dibenzofuran	<0.5
1,4-Dichlorobenzene	<0.5	2,4-Dinitrotoluene	<0.5
1,2-Dichlorobenzene	<0.5	4-Nitrophenol	<5
Benzyl alcohol	<0.5	Diethyl phthalate	<0.5
Bis(2-chloroisopropyl) ether	<0.5	Fluorene	<0.5
2-Methylphenol	<5	4-Chlorophenyl phenyl ether	<0.5
Hexachloroethane	<0.5	N-Nitrosodiphenylamine	<0.5
N-Nitroso-di-n-propylamine	<0.5	4-Nitroaniline	<5
4-Methylphenol	<5	4,6-Dinitro-2-methylphenol	<15
Nitrobenzene	<0.5	4-Bromophenyl phenyl ether	<0.5
Isophorone	<0.5	Hexachlorobenzene	<0.5
2-Nitrophenol	<5	Pentachlorophenol	<5
2,4-Dimethylphenol	<5	Phenanthrene	<0.5
Benzoic acid	<50	Anthracene	<0.5
Bis(2-chloroethoxy)methane	<0.5	Carbazole	<0.5
2,4-Dichlorophenol	<5	Di-n-butyl phthalate	<0.5
1,2,4-Trichlorobenzene	<0.5	Fluoranthene	<0.5
Naphthalene	<0.5	Pyrene	<0.5
Hexachlorobutadiene	<0.5	Benzyl butyl phthalate	<0.5
4-Chloroaniline	<1.5	Benz(a)anthracene	<0.5
4-Chloro-3-methylphenol	<5	Chrysene	<0.5
2-Methylnaphthalene	<0.5	Bis(2-ethylhexyl) phthalate	<0.5
Hexachlorocyclopentadiene	<1.5	Di-n-octyl phthalate	<0.5
2,4,6-Trichlorophenol	<5	Benzo(a)pyrene	<0.5
2,4,5-Trichlorophenol	<5	Benzo(b)fluoranthene	<0.5
2-Chloronaphthalene	<0.5	Benzo(k)fluoranthene	<0.5
2-Nitroaniline	<0.5	Indeno(1,2,3-cd)pyrene	<0.5
Dimethyl phthalate	<0.5	Dibenz(a,h)anthracene	<0.5
Acenaphthylene	<0.5	Benzo(g,h,i)perylene	<0.5
2,6-Dinitrotoluene	<0.5		

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 12/17/07
Date Received: 11/29/07
Project: 521-07001-01, F&BI 711369
Date Analyzed: 12/05/07

**RESULTS FROM THE ANALYSIS OF WATER SAMPLES
FOR TOTAL SUSPENDED SOLIDS
BY METHOD 2540D**

Results Reported as mg/L (ppm)

<u>Sample ID</u> Laboratory ID	Total Suspended <u>Solids</u>
SP-1 711369-01	43.6
Method Blank	<10

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 12/17/07
Date Received: 11/29/07
Project: 521-07001-01, F&BI 711369
Date Extracted: 12/05/07
Date Analyzed: 12/07/07

**RESULTS FROM THE ANALYSIS OF WATER SAMPLES
FOR PCBs AS AROCLORS
USING EPA METHOD 8082**
Results Reported as µg/L (ppb)

<u>Sample ID</u> Laboratory ID	Aroclor								Surrogate
	<u>1221</u>	<u>1232</u>	<u>1016</u>	<u>1242</u>	<u>1248</u>	<u>1254</u>	<u>1260</u>	<u>1262</u>	(% Rec.) (Limit 61-132)
SP-1 711369-01	<0.07	<0.07	<0.07	<0.07	<0.07	<0.07	<0.07	<0.07	87
Method Blank	<0.07	<0.07	<0.07	<0.07	<0.07	<0.07	<0.07	<0.07	36 vo

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 12/17/07

Date Received: 11/29/07

Project: 521-07001-01, F&BI 711369

**QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER
SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS
DIESEL EXTENDED USING METHOD NWTPH-Dx**

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Diesel Extended	ug/L (ppb)	2,500	88	82	67-141	7

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 12/17/07

Date Received: 11/29/07

Project: 521-07001-01, F&BI 711369

**QUALITY ASSURANCE RESULTS
FOR THE ANALYSIS OF WATER SAMPLES
FOR TOTAL METALS USING EPA METHOD 200.8**

Laboratory Code: 711384-02 (Duplicate)

Analyte	Reporting Units	Sample Result	Duplicate Result	Relative Percent Difference	Acceptance Criteria
Chromium	ug/L (ppb)	<1	<1	nm	0-20
Nickel	ug/L (ppb)	1.16	1.22	5	0-20
Copper	ug/L (ppb)	43.0	42.8	0	0-20
Zinc	ug/L (ppb)	29.9	30.2	1	0-20
Cadmium	ug/L (ppb)	<1	<1	nm	0-20
Lead	ug/L (ppb)	<1	<1	nm	0-20

Laboratory Code: 711384-02 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Acceptance Criteria
Chromium	ug/L (ppb)	20	<1	104	50-150
Nickel	ug/L (ppb)	20	1.16	99	50-150
Copper	ug/L (ppb)	20	43.0	82 b	50-150
Zinc	ug/L (ppb)	50	29.9	96 b	50-150
Cadmium	ug/L (ppb)	5	<1	103	50-150
Lead	ug/L (ppb)	10	<1	105	50-150

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Chromium	ug/L (ppb)	20	106	70-130
Nickel	ug/L (ppb)	20	102	70-130
Copper	ug/L (ppb)	20	103	70-130
Zinc	ug/L (ppb)	50	93	70-130
Cadmium	ug/L (ppb)	5	98	70-130
Lead	ug/L (ppb)	10	104	70-130

FRIEDMAN & BRUYA, INC.**ENVIRONMENTAL CHEMISTS**

Date of Report: 12/17/07

Date Received: 11/29/07

Project: 521-07001-01, F&BI 711369

**QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER
SAMPLES FOR PNA'S BY EPA METHOD 8270C SIM**

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Naphthalene	ug/L (ppb)	5	86	89	70-130	3
Acenaphthylene	ug/L (ppb)	5	88	92	70-130	4
Acenaphthene	ug/L (ppb)	5	87	91	70-130	4
Fluorene	ug/L (ppb)	5	86	88	70-130	2
Phenanthrene	ug/L (ppb)	5	87	90	70-130	3
Anthracene	ug/L (ppb)	5	84	89	70-130	6
Fluoranthene	ug/L (ppb)	5	88	92	70-130	4
Pyrene	ug/L (ppb)	5	88	92	70-130	4
Benz(a)anthracene	ug/L (ppb)	5	84	89	70-130	6
Chrysene	ug/L (ppb)	5	88	93	70-130	6
Benzo(b)fluoranthene	ug/L (ppb)	5	99	100	70-130	1
Benzo(k)fluoranthene	ug/L (ppb)	5	87	92	70-130	6
Benzo(a)pyrene	ug/L (ppb)	5	90	94	70-130	4
Indeno(1,2,3-cd)pyrene	ug/L (ppb)	5	95	97	70-130	2
Dibenz(a,h)anthracene	ug/L (ppb)	5	91	95	70-130	4
Benzo(g,h,i)perylene	ug/L (ppb)	5	91	93	70-130	2

Note: The initial calibration verification result for anthracene-d10 exceeded 15% deviation. The average deviation for all compounds was not greater than 15%; therefore, the initial calibration is considered valid.

Note: The calibration verification result for anthracene-d10 exceeded 15% deviation. The average deviation for all compounds was not greater than 15%; therefore, the initial calibration is considered valid.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 12/17/07

Date Received: 11/29/07

Project: 521-07001-01, F&BI 711369

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR SEMIVOLATILES BY EPA METHOD 8270C

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Phenol	ug/L (ppb)	75	32	29	19-51	10
2-Chlorophenol	ug/L (ppb)	75	71	68	54-104	4
1,4-Dichlorobenzene	ug/L (ppb)	50	63	67	48-108	6
Benzyl alcohol	ug/L (ppb)	50	67	61	43-107	9
N-Nitroso-di-n-propylamine	ug/L (ppb)	50	74	67	56-115	10
1,2,4-Trichlorobenzene	ug/L (ppb)	50	63	66	53-107	5
Naphthalene	ug/L (ppb)	50	83	80	57-109	4
4-Chloroaniline	ug/L (ppb)	50	44	35	11-144	23 vo
4-Chloro-3-methylphenol	ug/L (ppb)	75	78	73	52-109	7
2-Methylnaphthalene	ug/L (ppb)	50	78	77	48-128	1
2-Nitroaniline	ug/L (ppb)	50	86	77	55-123	11
Acenaphthylene	ug/L (ppb)	50	93	85	55-116	9
3-Nitroaniline	ug/L (ppb)	50	65	56	10-263	15
Acenaphthene	ug/L (ppb)	50	91	82	26-127	10
Dibenzofuran	ug/L (ppb)	50	83	75	50-131	10
2,4-Dinitrotoluene	ug/L (ppb)	50	82	72	58-121	13
4-Nitrophenol	ug/L (ppb)	75	38	34	10-75	11
Fluorene	ug/L (ppb)	50	94	85	57-119	10
4-Nitroaniline	ug/L (ppb)	50	81	71	43-173	13
Pentachlorophenol	ug/L (ppb)	75	76	65	16-122	16
Phenanthrene	ug/L (ppb)	50	94	84	58-114	11
Anthracene	ug/L (ppb)	50	96	86	56-115	11
Fluoranthene	ug/L (ppb)	50	97	87	56-113	11
Pyrene	ug/L (ppb)	50	97	87	51-111	11
Benz(a)anthracene	ug/L (ppb)	50	90	81	55-117	11
Chrysene	ug/L (ppb)	50	94	84	39-125	11
Benzo(a)pyrene	ug/L (ppb)	50	108	95	52-117	13
Benzo(b)fluoranthene	ug/L (ppb)	50	77	67	50-113	14
Benzo(k)fluoranthene	ug/L (ppb)	50	103	102	57-133	1
Indeno(1,2,3-cd)pyrene	ug/L (ppb)	50	107	95	40-135	12
Dibenz(a,h)anthracene	ug/L (ppb)	50	95	85	46-135	11
Benzo(g,h,i)perylene	ug/L (ppb)	50	98	87	48-143	12

Note: The initial calibration verification result for benzo(k)fluoranthene exceeded 15% deviation. The average deviation for all compounds was not greater than 15%; therefore, the initial calibration is considered valid.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 12/17/07

Date Received: 11/29/07

Project: 521-07001-01, F&BI 711369

**QUALITY ASSURANCE RESULTS
FROM THE ANALYSIS OF WATER SAMPLES FOR
TOTAL SUSPENDED SOLIDS
BY METHOD 2540D**

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
TSS	mg/L	50	105	96	71-130	9

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 12/17/07

Date Received: 11/29/07

Project: 521-07001-01, F&BI 711369

**QUALITY ASSURANCE RESULTS
FOR THE ANALYSIS OF WATER SAMPLES FOR POLYCHLORINATED
BIPHENYLS AS
AROCOR 1016/1260 BY EPA METHOD 8082**

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	% Recovery LCS	% Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Aroclor 1016	µg/L (ppb)	2.5	74	60	52-135	21 vo
Aroclor 1260	µg/L (ppb)	2.5	87	81	60-128	7

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Data Qualifiers & Definitions

- a - The analyte was detected at a level less than five times the reporting limit. The RPD results may not provide reliable information on the variability of the analysis.
- A1 - More than one compound of similar molecule structure was identified with equal probability.
- b - The analyte was spiked at a level that was less than five times that present in the sample. Matrix spike recoveries may not be meaningful.
- ca - The calibration results for this range fell outside of acceptance criteria. The value reported is an estimate.
- c - The presence of the analyte indicated may be due to carryover from previous sample injections.
- d - The sample was diluted. Detection limits may be raised due to dilution.
- ds - The sample was diluted. Detection limits are raised due to dilution and surrogate recoveries may not be meaningful.
- dv - Insufficient sample was available to achieve normal reporting limits and limits are raised accordingly.
- fb - The analyte indicated was found in the method blank. The result should be considered an estimate.
- fc - The compound is a common laboratory and field contaminant.
- fp - Compounds in the sample matrix interfered with quantitation of the analyte. The reported concentration may be a false positive.
- hr - The sample and duplicate were reextracted and reanalyzed. RPD results were still outside of control limits. The variability is attributed to sample inhomogeneity.
- ht - The sample was extracted outside of holding time. Results should be considered estimates.
- ip - Recovery fell outside of normal control limits. Compounds in the sample matrix interfered with the quantitation of the analyte.
- j - The result is below normal reporting limits. The value reported is an estimate.
- J - The internal standard associated with the analyte is out of control limits. The reported concentration is an estimate.
- jl - The analyte result in the laboratory control sample is out of control limits. The reported concentration should be considered an estimate.
- jr - The rpd result in laboratory control sample associated with the analyte is out of control limits. The reported concentration should be considered an estimate.
- lc - The presence of the compound indicated is likely due to laboratory contamination.
- L - The reported concentration was generated from a library search.
- nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.
- pc - The sample was received in a container not approved by the method. The value reported should be considered an estimate.
- pr - The sample was received with incorrect preservation. The value reported should be considered an estimate.
- ve - The value reported exceeded the calibration range established for the analyte. The reported concentration should be considered an estimate.
- vo - The value reported fell outside the control limits established for this analyte.
- x - The pattern of peaks present is not indicative of diesel.
- y - The pattern of peaks present is not indicative of motor oil.

Send Report To LYNN D. GREEN
Company EVREN NORTHWEST, INC.
Address PO BOX 80747
City, State, ZIP PORTLAND, OR 97280-1747
Phone # (503)452-5561 Fax # (503)452-7669



ME 11/29/07

AIG/BO4

SAMPLERS (signature) <i>[Signature]</i>		Page # <i>1</i> of <i>1</i>
PROJECT NAME/NO. Fred Dawne Sulvage 521-07001-01	PO #	TURNDOWN TIME <input checked="" type="checkbox"/> Standard (2 Weeks) <input type="checkbox"/> RUSH Rush charges authorized by:
REMARKS Hi-res for all Analyses		SAMPLE DISPOSAL <input type="checkbox"/> Dispose after 30 days <input type="checkbox"/> Return samples <input type="checkbox"/> Will call with instructions

[illegible]

Friedman & Bruya, Inc.
3012 16th Avenue West
Seattle, WA 98119-2029
Ph. (206) 285-8282
Fax (206) 283-5044

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by: 	Mike Krzeminski	ENW	11/28/07	1530
Received by: 	Nham Phan	FeBI	11/29/07	11:00
Relinquished by:				
Received by:				

Samples received at 4 °C

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Charlene Morrow, M.S.
Yelena Aravkina, M.S.
Bradley T. Benson, B.S.
Kurt Johnson, B.S.

3012 16th Avenue West
Seattle, WA 98119-2029
TEL: (206) 285-8282
FAX: (206) 283-5044
e-mail: fbi@isomedia.com

January 8, 2008

Lynn Green, Project Manager
Evren Northwest, Inc.
PO Box 80747
Portland, OR 97280

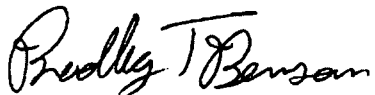
Dear Mr. Green:

Included are the results from the testing of material submitted on November 19, 2007 from the 521-07001-02 Fred Devine, F&BI 711253 project. There are 5 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

We appreciate this opportunity to be of service to you and hope you will call if you should have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.



Bradley T. Benson
Chemist

Enclosures

c: Neil Wohlers, Mike Krzeminski
ENW0108R.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

This case narrative encompasses samples received on November 19, 2007 by Friedman & Bruya, Inc. from the Evren Northwest, Inc. 521-07001-02 Fred Devine, F&BI 711253 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID
711253-01

Evren Northwest, Inc.
SP01-071116

All quality control requirements were acceptable.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 200.8

Client ID:	SP01-071116	Client:	Evren Northwest, Inc.
Date Received:	11/19/07	Project:	521-07001-02 Fred Devine
Date Extracted:	01/07/08	Lab ID:	711253-01
Date Analyzed:	01/07/08	Data File:	711253-01.044
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	hr

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	120	60	125
Indium	117	60	125
Bismuth	113	60	125

Analyte:	Concentration ug/L (ppb)
Chromium	1.92
Nickel	2.16
Copper	21.7
Zinc	321
Cadmium	<1
Lead	8.84

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 200.8

Client ID:	Method Blank	Client:	Evren Northwest, Inc.
Date Received:	Not Applicable	Project:	521-07001-02 Fred Devine
Date Extracted:	01/07/08	Lab ID:	I7-493 mb
Date Analyzed:	01/07/08	Data File:	I7-493 mb.008
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	hr

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	104	60	125
Indium	102	60	125
Bismuth	102	60	125

Analyte:	Concentration ug/L (ppb)
Chromium	<1
Nickel	<1
Copper	<1
Zinc	<1
Cadmium	<1
Lead	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 01/08/08

Date Received: 11/19/07

Project: 521-07001-02 Fred Devine, F&BI 711253

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR TOTAL METALS USING EPA METHOD 200.8

Laboratory Code: 801049-13 (Duplicate)

Analyte	Reporting Units	Sample Result	Duplicate Result	Relative Percent Difference	Acceptance Criteria
Chromium	ug/L (ppb)	1.23	1.11	10	0-20
Nickel	ug/L (ppb)	4.39	3.95	11	0-20
Copper	ug/L (ppb)	<1	<1	nm	0-20
Zinc	ug/L (ppb)	1.82	1.50	19	0-20
Cadmium	ug/L (ppb)	<1	<1	nm	0-20
Lead	ug/L (ppb)	<1	<1	nm	0-20

Laboratory Code: 801049-13 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Acceptance Criteria
Chromium	ug/L (ppb)	20	1.23	84	50-150
Nickel	ug/L (ppb)	20	4.39	76 b	50-150
Copper	ug/L (ppb)	20	<1	77	50-150
Zinc	ug/L (ppb)	50	1.82	83	50-150
Cadmium	ug/L (ppb)	5	<1	98	50-150
Lead	ug/L (ppb)	10	<1	103	50-150

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Chromium	ug/L (ppb)	20	102	70-130
Nickel	ug/L (ppb)	20	103	70-130
Copper	ug/L (ppb)	20	103	70-130
Zinc	ug/L (ppb)	50	104	70-130
Cadmium	ug/L (ppb)	5	108	70-130
Lead	ug/L (ppb)	10	103	70-130

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Data Qualifiers & Definitions

- a - The analyte was detected at a level less than five times the reporting limit. The RPD results may not provide reliable information on the variability of the analysis.
- A1 - More than one compound of similar molecule structure was identified with equal probability.
- b - The analyte was spiked at a level that was less than five times that present in the sample. Matrix spike recoveries may not be meaningful.
- ca - The calibration results for this range fell outside of acceptance criteria. The value reported is an estimate.
- c - The presence of the analyte indicated may be due to carryover from previous sample injections.
- d - The sample was diluted. Detection limits may be raised due to dilution.
- ds - The sample was diluted. Detection limits are raised due to dilution and surrogate recoveries may not be meaningful.
- dv - Insufficient sample was available to achieve normal reporting limits and limits are raised accordingly.
- fb - The analyte indicated was found in the method blank. The result should be considered an estimate.
- fc - The compound is a common laboratory and field contaminant.
- hr - The sample and duplicate were reextracted and reanalyzed. RPD results were still outside of control limits. The variability is attributed to sample inhomogeneity.
- ht - The sample was extracted outside of holding time. Results should be considered estimates.
- ip - Recovery fell outside of normal control limits. Compounds in the sample matrix interfered with the quantitation of the analyte.
- j - The result is below normal reporting limits. The value reported is an estimate.
- J - The internal standard associated with the analyte is out of control limits. The reported concentration is an estimate.
- jl - The analyte result in the laboratory control sample is out of control limits. The reported concentration should be considered an estimate.
- jr - The rpd result in laboratory control sample associated with the analyte is out of control limits. The reported concentration should be considered an estimate.
- js - The surrogate associated with the analyte is out of control limits. The reported concentration should be considered an estimate.
- lc - The presence of the compound indicated is likely due to laboratory contamination.
- L - The reported concentration was generated from a library search.
- nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.
- pc - The sample was received in a container not approved by the method. The value reported should be considered an estimate.
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- x - The pattern of peaks present is not indicative of diesel.
- y - The pattern of peaks present is not indicative of motor oil.

Friedman & Bruce, Inc 711253
 Environmental Services Laboratory Inc
 12400 NW Upper Boones Ferry Road • Suite 270 • Portland, OR 97224 • (503) 670-8520 • FAX (503) 670-9243

ME 11-19-07 #14/B0
CHAIN OF CUSTODY

Company: EUREN NW					Project Manager: Lynn Green					LABORATORY #																																
Address: PO BOX 80747																																										
Phone: 503-452-5561 Fax: 452-7449					ANALYSIS REQUEST																																					
SAMPLE DISPOSAL INSTRUCTIONS					<table border="1"> <tr> <th colspan="3">PETROLEUM HYDROCARBONS</th> <th colspan="4">ORGANICS</th> <th colspan="2">INORGANICS</th> <th colspan="3">TCLP</th> </tr> <tr> <td>NWTH-HCD</td> <td>NWTH-OK</td> <td>NWTH-DX</td> <td>4020M - BETX only</td> <td>4270 SIMS PAHs</td> <td>Halogenated VOCs/GCMS</td> <td>Aromatic VOCs/GCMS</td> <td>2260 GCMS Volatiles</td> <td>4270 GCMS Semivolatiles</td> <td>4081 GC Pesticides/PCBs</td> <td>4081m PCBs only</td> <td>RCRA Metals (6)</td> <td>Priority Pollutants Metals (13)</td> <td>TCLP Metals (6)</td> <td>TCLP Volatiles 2260 ZH-EPA</td> <td>TCLP Semivolatiles 4270</td> </tr> </table>										PETROLEUM HYDROCARBONS			ORGANICS				INORGANICS		TCLP			NWTH-HCD	NWTH-OK	NWTH-DX	4020M - BETX only	4270 SIMS PAHs	Halogenated VOCs/GCMS	Aromatic VOCs/GCMS	2260 GCMS Volatiles	4270 GCMS Semivolatiles	4081 GC Pesticides/PCBs	4081m PCBs only	RCRA Metals (6)	Priority Pollutants Metals (13)	TCLP Metals (6)	TCLP Volatiles 2260 ZH-EPA	TCLP Semivolatiles 4270
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					<p>① Analysis 11/19/07</p> <p>Samples received at 5:00</p>																																					
PROJECT INFORMATION					SAMPLE RECEIPT					RELINQUISHED BY: 1																																
PROJECT NUMBER: SL-07001-02					TOTAL NUMBER OF CONTAINERS					SIGNATURE: [Signature] Time: 09:35																																
PROJECT NAME: FRED DENING					COC SEALS INTACT? Y/N/NA					SIGNATURE: _____ Time: _____																																
PURCHASE ORDER NUMBER: SL-07001					RECEIVED INTACT? Y/N					Printed Name: _____ Date: _____																																
ONGOING PROJECT? YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>					RECEIVED COLD? Y/N					Printed Name: _____ Date: _____																																
PUSH AUTHORIZATION REQUIRED FOR RUSH PROJECTS					TAT (NORMAL) 2 WKS (RUSH) <input type="checkbox"/> 24 HR <input type="checkbox"/> 48 HRS <input type="checkbox"/> 72 HRS <input checked="" type="checkbox"/> 1 WK <input type="checkbox"/> 2 WK <input type="checkbox"/> 4 WK <input type="checkbox"/> 8 WK <input type="checkbox"/> 12 WK <input type="checkbox"/> 16 WK <input type="checkbox"/> 20 WK <input type="checkbox"/> 24 WK <input type="checkbox"/> 30 WK <input type="checkbox"/> 36 WK <input type="checkbox"/> 40 WK <input type="checkbox"/> 44 WK <input type="checkbox"/> 48 WK <input type="checkbox"/> 52 WK <input type="checkbox"/> 56 WK <input type="checkbox"/> 60 WK <input type="checkbox"/> 64 WK <input type="checkbox"/> 68 WK <input type="checkbox"/> 72 WK <input type="checkbox"/> 76 WK <input type="checkbox"/> 80 WK <input type="checkbox"/> 84 WK <input type="checkbox"/> 88 WK <input type="checkbox"/> 92 WK <input type="checkbox"/> 96 WK <input type="checkbox"/> 100 WK					RECEIVED BY: 1					RECEIVED BY: 2																											
GREATER THAN 24 HR NOTICE? YES <input type="checkbox"/> NO <input type="checkbox"/> (LAB USE ONLY)					Signature: Patti Green Time: 07:35					Signature: M. L. L. L. Time: 08:30																																
SPECIAL INSTRUCTIONS:					Printed Name: Patti Green Date: 11/19/07					Printed Name: N. Phan Date: 11/19/07																																
H.C.H. RES FOR PCBs, SVOCs (Full list)					Company: ENW					Company: F&B I																																
Sampled by: [Signature]					Received via: _____					ESL Inc.:																																

DISTRIBUTION: White, Canary - ESL, Pink - Originator

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Charlene Morrow, M.S.
Yelena Aravkina, M.S.
Bradley T. Benson, B.S.
Kurt Johnson, B.S.

3012 16th Avenue West
Seattle, WA 98119-2029
TEL: (206) 285-8282
FAX: (206) 283-5044
e-mail: fbi@isomedia.com

December 13, 2007

Lynn Green, Project Manager
Evren Northwest, Inc.
PO Box 80747
Portland, OR 97280

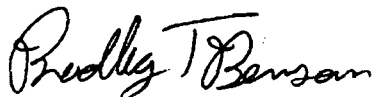
Dear Mr. Green:

Included are the results from the testing of material submitted on November 19, 2007 from the 521-07001-02, F&BI 711253 project. There are 12 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

We appreciate this opportunity to be of service to you and hope you will call if you should have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.



Bradley T. Benson
Chemist

Enclosures

c: Neil Wohlers, Mike Krzeminski
ENW1213R.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

This case narrative encompasses samples received on November 19, 2007 by Friedman & Bruya, Inc. from the Evren Northwest, Inc. 521-07001-02, F&BI 711253 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID
711253-01

Evren Northwest, Inc.
SP01-071116

All quality control requirements were acceptable.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 12/13/07
Date Received: 11/19/07
Project: 521-07001-02, F&BI 711253
Date Extracted: 11/20/07
Date Analyzed: 11/21/07

**RESULTS FROM THE ANALYSIS OF THE WATER SAMPLES
FOR GASOLINE, DIESEL AND HEAVY OIL BY NWTPH-HCID
Results Reported as Not Detected (ND) or Detected (D)**

THE DATA PROVIDED BELOW WAS PERFORMED PER THE GUIDELINES ESTABLISHED BY THE
WASHINGTON DEPARTMENT OF ECOLOGY AND WERE NOT DESIGNED TO PROVIDE INFORMATION
WITH REGARDS TO THE ACTUAL IDENTIFICATION OF ANY MATERIAL PRESENT

<u>Sample ID</u> Laboratory ID	<u>Gasoline</u>	<u>Diesel</u>	<u>Heavy Oil</u>	Surrogate (% Recovery) (Limit 50-150)
SP01-071116 711253-01	ND	ND	D	96
Method Blank	ND	ND	ND	93

ND - Material not detected at or above 0.2 mg/L gas, 0.5 mg/L diesel and 0.5 mg/L heavy oil.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 12/13/07
Date Received: 11/19/07
Project: 521-07001-02, F&BI 711253
Date Extracted: 11/20/07
Date Analyzed: 11/21/07

**RESULTS FROM THE ANALYSIS OF THE WATER SAMPLES
FOR TOTAL PETROLEUM HYDROCARBONS AS
DIESEL AND MOTOR OIL
USING METHOD NWTPH-Dx
Results Reported as ug/L (ppb)**

<u>Sample ID</u>	<u>Diesel Range</u>	<u>Motor Oil Range</u>	<u>Surrogate</u>
Laboratory ID	(C ₁₀ -C ₂₅)	(C ₂₅ -C ₃₆)	(% Recovery)
			(Limit 52-134)
SP01-071116	310 x	590	96
711253-01			
Method Blank	<50	<250	93

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 12/13/07

Date Received: 11/19/07

Project: 521-07001-02, F&BI 711253

Date Analyzed: 11/19/07

**RESULTS FROM THE ANALYSIS OF WATER SAMPLES
FOR TOTAL SUSPENDED SOLIDS
BY METHOD 2540D**

Results Reported as mg/L (ppm)

<u>Sample ID</u> Laboratory ID	Total Suspended <u>Solids</u>
SP01-071116 711253-01	16.4
Method Blank	<10

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Semivolatile Compounds By EPA Method 8270C

Client Sample ID: SP01-071116
 Date Received: 11/19/07
 Date Extracted: 11/20/07
 Date Analyzed: 12/07/07
 Matrix: Water
 Units: ug/L (ppb)

Client: Evren Northwest, Inc.
 Project: 521-07001-02, F&BI 711253
 Lab ID: 711253-01
 Data File: 120704.D
 Instrument: GCMS3
 Operator: YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	51	23	77
Phenol-d6	35	10	63
Nitrobenzene-d5	95	58	113
2-Fluorobiphenyl	95	57	111
2,4,6-Tribromophenol	61	40	105
Terphenyl-d14	88	34	129

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Phenol	<10	3-Nitroaniline	<3
Bis(2-chloroethyl) ether	<1	Acenaphthene	<1
2-Chlorophenol	<10	2,4-Dinitrophenol	<30
1,3-Dichlorobenzene	<1	Dibenzofuran	<1
1,4-Dichlorobenzene	<1	2,4-Dinitrotoluene	<1
1,2-Dichlorobenzene	<1	4-Nitrophenol	<10
Benzyl alcohol	<1	Diethyl phthalate	<1
Bis(2-chloroisopropyl) ether	<1	Fluorene	<1
2-Methylphenol	<10	4-Chlorophenyl phenyl ether	<1
Hexachloroethane	<1	N-Nitrosodiphenylamine	<1
N-Nitroso-di-n-propylamine	<1	4-Nitroaniline	<10
4-Methylphenol	<10	4,6-Dinitro-2-methylphenol	<30
Nitrobenzene	<1	4-Bromophenyl phenyl ether	<1
Isophorone	<1	Hexachlorobenzene	<1
2-Nitrophenol	<10	Pentachlorophenol	<10
2,4-Dimethylphenol	<10	Phenanthrene	<1
Benzoic acid	<100	Anthracene	<1
Bis(2-chloroethoxy)methane	<1	Carbazole	<1
2,4-Dichlorophenol	<10	Di-n-butyl phthalate	<1
1,2,4-Trichlorobenzene	<1	Fluoranthene	<1
Naphthalene	<1	Pyrene	<1
Hexachlorobutadiene	<1	Benzyl butyl phthalate	<1
4-Chloroaniline	<3	Benz(a)anthracene	<1
4-Chloro-3-methylphenol	<10	Chrysene	<1
2-Methylnaphthalene	<1	Bis(2-ethylhexyl) phthalate	<10
Hexachlorocyclopentadiene	<3	Di-n-octyl phthalate	<1
2,4,6-Trichlorophenol	<10	Benzo(a)pyrene	<1
2,4,5-Trichlorophenol	<10	Benzo(b)fluoranthene	<1
2-Chloronaphthalene	<1	Benzo(k)fluoranthene	<1
2-Nitroaniline	<1	Indeno(1,2,3-cd)pyrene	<1
Dimethyl phthalate	<1	Dibenz(a,h)anthracene	<1
Acenaphthylene	<1	Benzo(g,h,i)perylene	<1
2,6-Dinitrotoluene	<1		

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Semivolatile Compounds By EPA Method 8270C

Client Sample ID:	Method Blank	Client:	Evren Northwest, Inc.
Date Received:	Not Applicable	Project:	521-07001-02, F&BI 711253
Date Extracted:	11/20/07	Lab ID:	071885mb
Date Analyzed:	12/05/07	Data File:	120520.D
Matrix:	Water	Instrument:	GCMS3
Units:	ug/L (ppb)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	56	23	77
Phenol-d6	37	10	63
Nitrobenzene-d5	100	58	113
2-Fluorobiphenyl	96	57	111
2,4,6-Tribromophenol	54	40	105
Terphenyl-d14	97	34	129

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Phenol	<10	3-Nitroaniline	<3
Bis(2-chloroethyl) ether	<1	Acenaphthene	<1
2-Chlorophenol	<10	2,4-Dinitrophenol	<30
1,3-Dichlorobenzene	<1	Dibenzofuran	<1
1,4-Dichlorobenzene	<1	2,4-Dinitrotoluene	<1
1,2-Dichlorobenzene	<1	4-Nitrophenol	<10
Benzyl alcohol	<1	Diethyl phthalate	<1
Bis(2-chloroisopropyl) ether	<1	Fluorene	<1
2-Methylphenol	<10	4-Chlorophenyl phenyl ether	<1
Hexachloroethane	<1	N-Nitrosodiphenylamine	<1
N-Nitroso-di-n-propylamine	<1	4-Nitroaniline	<10
4-Methylphenol	<10	4,6-Dinitro-2-methylphenol	<30
Nitrobenzene	<1	4-Bromophenyl phenyl ether	<1
Isophorone	<1	Hexachlorobenzene	<1
2-Nitrophenol	<10	Pentachlorophenol	<10
2,4-Dimethylphenol	<10	Phenanthrene	<1
Benzoic acid	<100	Anthracene	<1
Bis(2-chloroethoxy)methane	<1	Carbazole	<1
2,4-Dichlorophenol	<10	Di-n-butyl phthalate	<1
1,2,4-Trichlorobenzene	<1	Fluoranthene	<1
Naphthalene	<1	Pyrene	<1
Hexachlorobutadiene	<1	Benzyl butyl phthalate	<1
4-Chloroaniline	<3	Benz(a)anthracene	<1
4-Chloro-3-methylphenol	<10	Chrysene	<1
2-Methylnaphthalene	<1	Bis(2-ethylhexyl) phthalate	<10
Hexachlorocyclopentadiene	<3	Di-n-octyl phthalate	<1
2,4,6-Trichlorophenol	<10	Benzo(a)pyrene	<1
2,4,5-Trichlorophenol	<10	Benzo(b)fluoranthene	<1
2-Chloronaphthalene	<1	Benzo(k)fluoranthene	<1
2-Nitroaniline	<1	Indeno(1,2,3-cd)pyrene	<1
Dimethyl phthalate	<1	Dibenz(a,h)anthracene	<1
Acenaphthylene	<1	Benzo(g,h,i)perylene	<1
2,6-Dinitrotoluene	<1		

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 12/13/07
Date Received: 11/19/07
Project: 521-07001-02, F&BI 711253
Date Extracted: 11/20/07
Date Analyzed: 11/27/07

**RESULTS FROM THE ANALYSIS OF WATER SAMPLES
FOR PCBs AS AROCLORS
USING EPA METHOD 8082**
Results Reported as ug/L (ppb)

<u>Sample ID</u> Laboratory ID	Aroclor								Surrogate
	<u>1221</u>	<u>1232</u>	<u>1016</u>	<u>1242</u>	<u>1248</u>	<u>1254</u>	<u>1260</u>	<u>1262</u>	(% Rec.) (Limit 50-150)
SP01-071116 711253-01	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	63
Method Blank	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	60

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 12/13/07

Date Received: 11/19/07

Project: 521-07001-02, F&BI 711253

**QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER
SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS
DIESEL EXTENDED USING METHOD NWTPH-Dx**

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Diesel Extended	ug/L (ppb)	2,500	94	114	70-130	19

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 12/13/07

Date Received: 11/19/07

Project: 521-07001-02, F&BI 711253

**QUALITY ASSURANCE RESULTS
FROM THE ANALYSIS OF WATER SAMPLES FOR
TOTAL SUSPENDED SOLIDS
BY METHOD 2540D**

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
TSS	mg/L	50	97	102	71-130	5

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 12/13/07

Date Received: 11/19/07

Project: 521-07001-02, F&BI 711253

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR SEMIVOLATILES BY EPA METHOD 8270C

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Phenol	ug/L (ppb)	75	40	44	19-51	10
2-Chlorophenol	ug/L (ppb)	75	87	91	54-104	4
1,4-Dichlorobenzene	ug/L (ppb)	50	88	91	48-108	3
Benzyl alcohol	ug/L (ppb)	50	76	80	43-107	5
N-Nitroso-di-n-propylamine	ug/L (ppb)	50	85	88	56-115	3
1,2,4-Trichlorobenzene	ug/L (ppb)	50	88	89	53-107	1
Naphthalene	ug/L (ppb)	50	102	104	57-109	2
4-Chloroaniline	ug/L (ppb)	50	70	72	11-144	3
4-Chloro-3-methylphenol	ug/L (ppb)	75	89	92	52-109	3
2-Methylnaphthalene	ug/L (ppb)	50	98	99	48-128	1
2-Nitroaniline	ug/L (ppb)	50	99	103	55-123	4
Acenaphthylene	ug/L (ppb)	50	110	114	55-116	4
3-Nitroaniline	ug/L (ppb)	50	76	80	10-263	5
Acenaphthene	ug/L (ppb)	50	106	110	26-127	4
Dibenzofuran	ug/L (ppb)	50	97	100	50-131	3
2,4-Dinitrotoluene	ug/L (ppb)	50	92	95	58-121	3
4-Nitrophenol	ug/L (ppb)	75	43	49	10-75	13
Fluorene	ug/L (ppb)	50	108	111	57-119	3
4-Nitroaniline	ug/L (ppb)	50	97	101	43-173	4
Pentachlorophenol	ug/L (ppb)	75	66	71	16-122	7
Phenanthrene	ug/L (ppb)	50	105	109	58-114	4
Anthracene	ug/L (ppb)	50	107	112	56-115	5
Fluoranthene	ug/L (ppb)	50	110	114 vo	56-113	4
Pyrene	ug/L (ppb)	50	107	111	51-111	4
Benz(a)anthracene	ug/L (ppb)	50	102	104	55-117	2
Chrysene	ug/L (ppb)	50	103	108	39-125	5
Benzo(a)pyrene	ug/L (ppb)	50	120 vo	124 vo	52-117	3
Benzo(b)fluoranthene	ug/L (ppb)	50	103	105	50-113	2
Benzo(k)fluoranthene	ug/L (ppb)	50	121	121	57-133	0
Indeno(1,2,3-cd)pyrene	ug/L (ppb)	50	115	120	40-135	4
Dibenz(a,h)anthracene	ug/L (ppb)	50	101	105	46-135	4
Benzo(g,h,i)perylene	ug/L (ppb)	50	105	108	48-143	3

Note: The initial calibration verification result for benzo(k)fluoranthene exceeded 15% deviation. The average deviation for all compounds was not greater than 15%; therefore, the initial calibration is considered valid.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 12/13/07

Date Received: 11/19/07

Project: 521-07001-02, F&BI 711253

**QUALITY ASSURANCE RESULTS
FOR THE ANALYSIS OF WATER SAMPLES FOR POLYCHLORINATED
BIPHENYLS AS
AROCOR 1016/1260 BY EPA METHOD 8082**

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	% Recovery LCS	% Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Aroclor 1016	ug/L (ppb)	2.5	93	85	52-135	9
Aroclor 1260	ug/L (ppb)	2.5	72	82	60-128	13

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Data Qualifiers & Definitions

- a - The analyte was detected at a level less than five times the reporting limit. The RPD results may not provide reliable information on the variability of the analysis.
- A1 - More than one compound of similar molecule structure was identified with equal probability.
- b - The analyte was spiked at a level that was less than five times that present in the sample. Matrix spike recoveries may not be meaningful.
- ca - The calibration results for this range fell outside of acceptance criteria. The value reported is an estimate.
- c - The presence of the analyte indicated may be due to carryover from previous sample injections.
- d - The sample was diluted. Detection limits may be raised due to dilution.
- ds - The sample was diluted. Detection limits are raised due to dilution and surrogate recoveries may not be meaningful.
- dv - Insufficient sample was available to achieve normal reporting limits and limits are raised accordingly.
- fb - The analyte indicated was found in the method blank. The result should be considered an estimate.
- fc - The compound is a common laboratory and field contaminant.
- fp - Compounds in the sample matrix interfered with quantitation of the analyte. The reported concentration may be a false positive.
- hr - The sample and duplicate were reextracted and reanalyzed. RPD results were still outside of control limits. The variability is attributed to sample inhomogeneity.
- ht - The sample was extracted outside of holding time. Results should be considered estimates.
- ip - Recovery fell outside of normal control limits. Compounds in the sample matrix interfered with the quantitation of the analyte.
- j - The result is below normal reporting limits. The value reported is an estimate.
- J - The internal standard associated with the analyte is out of control limits. The reported concentration is an estimate.
- jl - The analyte result in the laboratory control sample is out of control limits. The reported concentration should be considered an estimate.
- jr - The rpd result in laboratory control sample associated with the analyte is out of control limits. The reported concentration should be considered an estimate.
- lc - The presence of the compound indicated is likely due to laboratory contamination.
- L - The reported concentration was generated from a library search.
- nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.
- pc - The sample was received in a container not approved by the method. The value reported should be considered an estimate.
- pr - The sample was received with incorrect preservation. The value reported should be considered an estimate.
- ve - The value reported exceeded the calibration range established for the analyte. The reported concentration should be considered an estimate.
- vo - The value reported fell outside the control limits established for this analyte.
- x - The pattern of peaks present is not indicative of diesel.
- y - The pattern of peaks present is not indicative of motor oil.

17400 SW Upper Boones Ferry Road • Suite 270 • Portland, OR 97224 • (503) 670-8520 • FAX (503) 670-9243

CHAIN OF CUSTODY

[illegible]

ATTACHMENT C ELECTRONIC DATA DISK

Table 1 - COPCs and Screening Levels for Storm Water

Location ID		SP01		SP01		Lowest JSCS Screening Value
Sample ID		SP01-071116		SP-1		
Date Sampled		11/16/2007		11/28/2007		
		Concentration	Method Detection Limit	Concentration	Method detection Limit	
Constituent of Interest	Note	µg/L (ppb)	µg/L (ppb)	µg/L (ppb)	µg/L (ppb)	µg/L (ppb)
Phthalate Esters						
Di-n-butylphthalate		<1 (ND)	1	<0.5 (ND)	0.5	3
Bis[2-ethylhexyl]phthalate	c, nv	<10 (ND)	10	2.9	0.5	0.22
Polyaromatic Hydrocarbons						
Naphthalene	nc, v	<1 (ND)	1	0.15	0.05	0.2
Acenaphthylene	nc, v	<1 (ND)	1	<0.05 (ND)	0.05	0.2
Acenaphthene	c, nv	<1 (ND)	1	<0.05 (ND)	0.05	0.2
Fluorene	c, nv	<1 (ND)	1	0.11	0.05	0.2
Phenanthrene	c, nv	<1 (ND)	1	0.52	0.05	0.2
Anthracene	c, nv	<1 (ND)	1	0.053	0.05	0.2
Fluoranthene	nc, nv	<1 (ND)	1	0.45	0.05	0.2
Pyrene	c, nv	<1 (ND)	1	0.38	0.05	0.2
Benz[a]anthracene	c, nv	<1 (ND)	1	0.14	0.05	0.0018
Chrysene	nc, nv	<1 (ND)	1	0.30	0.05	0.0018
Benzo[b]fluoranthene	nc, v	<1 (ND)	1	0.26	0.05	0.0018
Benzo[k]fluoranthene	c, nv	<1 (ND)	1	0.081	0.05	0.0018
Benzo[a]pyrene	c, nv	<1 (ND)	1	0.15	0.05	0.0018
Indeno[1,2,3-cd]pyrene	c, nv	<1 (ND)	1	0.15	0.05	0.0018
Dibenz[a,h]anthracene	c, nv	<1 (ND)	1	<0.05 (ND)	0.05	0.0018
Benzo[g,h,i]perylene	nc, nv	<1 (ND)	1	0.15	0.05	0.2
Polychlorinated Biphenyls (PCBs)						
Aroclor 1016	c, nv	<0.1 (ND)	0.1	<0.07 (ND)	0.07	0.96
Aroclor 1221	c, nv	<0.1 (ND)	0.1	<0.07 (ND)	0.07	0.28
Aroclor 1232	c, nv	<0.1 (ND)	0.1	<0.07 (ND)	0.07	0.58
Aroclor 1242	c, nv	<0.1 (ND)	0.1	<0.07 (ND)	0.07	0.053
Aroclor 1248	c, nv	<0.1 (ND)	0.1	<0.07 (ND)	0.07	0.081
Aroclor 1254	c, nv	<0.1 (ND)	0.1	<0.07 (ND)	0.07	0.033
Aroclor 1260	c, nv	<0.1 (ND)	0.1	<0.07 (ND)	0.07	94
Aroclor 1262	c, nv	<0.1 (ND)	0.1	<0.07 (ND)	0.07	NE
Metals						
Cadmium	c, nv	<1 (ND)	1	1.34	1	0.094
Chromium (total)	nc, nv	1.92	1	5.32	1	100
Copper	c, nv	21.7	1	74.1	1	2.7
Lead	nc, nv	8.84	1	25.4	1	0.54
Nickel	nc, nv	2.16	1	5.22	1	NE
Zinc	nc, nv	321	1	457	1	33
Total Petroleum Hydrocarbons						
GRO	nc, v	<200 (ND)	200	—	—	100
DRO	nc, nv	310	50	850	50	NE
RRO	nc, nv	590	250	1100	250	NE

Notes:

ND = not detected at or above laboratory method reporting limits

NE = not established.

µg/L = micrograms per Liter

GRO = gasoline-range organics.

DRO = diesel-range organics.

RRO = residual-range organics.

JSCS = Portland Harbor Joint Source Control Strategy, ODEQ and EPA, December 2005

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
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December 13, 2007

Lynn Green, Project Manager
Evren Northwest, Inc.
PO Box 80747
Portland, OR 97280


Dear Mr. Green:

Included are the results from the testing of material submitted on November 19, 2007 from the 521-07001-02, F&BI 711253 project. There are 12 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

We appreciate this opportunity to be of service to you and hope you will call if you should have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.



Bradley T. Benson
Chemist

Enclosures

c: Neil Wohlers, Mike Krzeminski
ENW1213R.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

This case narrative encompasses samples received on November 19, 2007 by Friedman & Bruya, Inc. from the Evren Northwest, Inc. 521-07001-02, F&BI 711253 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID
711253-01

Evren Northwest, Inc.
SP01-071116

All quality control requirements were acceptable.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 12/13/07
Date Received: 11/19/07
Project: 521-07001-02, F&BI 711253
Date Extracted: 11/20/07
Date Analyzed: 11/21/07

**RESULTS FROM THE ANALYSIS OF THE WATER SAMPLES
FOR GASOLINE, DIESEL AND HEAVY OIL BY NWTPH-HCID
Results Reported as Not Detected (ND) or Detected (D)**

THE DATA PROVIDED BELOW WAS PERFORMED PER THE GUIDELINES ESTABLISHED BY THE
WASHINGTON DEPARTMENT OF ECOLOGY AND WERE NOT DESIGNED TO PROVIDE INFORMATION
WITH REGARDS TO THE ACTUAL IDENTIFICATION OF ANY MATERIAL PRESENT

<u>Sample ID</u>	<u>Gasoline</u>	<u>Diesel</u>	<u>Heavy Oil</u>	Surrogate <u>(% Recovery)</u>
Laboratory ID				(Limit 50-150)
SP01-071116	ND	ND	D	96
711253-01				
Method Blank	ND	ND	ND	93

ND - Material not detected at or above 0.2 mg/L gas, 0.5 mg/L diesel and 0.5 mg/L heavy oil.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 12/13/07
Date Received: 11/19/07
Project: 521-07001-02, F&BI 711253
Date Extracted: 11/20/07
Date Analyzed: 11/21/07

**RESULTS FROM THE ANALYSIS OF THE WATER SAMPLES
FOR TOTAL PETROLEUM HYDROCARBONS AS
DIESEL AND MOTOR OIL
USING METHOD NWTPH-Dx
Results Reported as ug/L (ppb)**

<u>Sample ID</u> Laboratory ID	<u>Diesel Range</u> (C ₁₀ -C ₂₅)	<u>Motor Oil Range</u> (C ₂₅ -C ₃₆)	<u>Surrogate</u> <u>(% Recovery)</u> (Limit 52-134)
SP01-071116 711253-01	310 x	590	96
Method Blank	<50	<250	93

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 12/13/07

Date Received: 11/19/07

Project: 521-07001-02, F&BI 711253

Date Analyzed: 11/19/07

**RESULTS FROM THE ANALYSIS OF WATER SAMPLES
FOR TOTAL SUSPENDED SOLIDS
BY METHOD 2540D**

Results Reported as mg/L (ppm)

<u>Sample ID</u> Laboratory ID	Total Suspended <u>Solids</u>
SP01-071116 711253-01	16.4
Method Blank	<10

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Semivolatile Compounds By EPA Method 8270C

Client Sample ID: SP01-071116
 Date Received: 11/19/07
 Date Extracted: 11/20/07
 Date Analyzed: 12/07/07
 Matrix: Water
 Units: ug/L (ppb)

Client: Evren Northwest, Inc.
 Project: 521-07001-02, F&BI 711253
 Lab ID: 711253-01
 Data File: 120704.D
 Instrument: GCMS3
 Operator: YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	51	23	77
Phenol-d6	35	10	63
Nitrobenzene-d5	95	58	113
2-Fluorobiphenyl	95	57	111
2,4,6-Tribromophenol	61	40	105
Terphenyl-d14	88	34	129

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Phenol	<10	3-Nitroaniline	<3
Bis(2-chloroethyl) ether	<1	Acenaphthene	<1
2-Chlorophenol	<10	2,4-Dinitrophenol	<30
1,3-Dichlorobenzene	<1	Dibenzofuran	<1
1,4-Dichlorobenzene	<1	2,4-Dinitrotoluene	<1
1,2-Dichlorobenzene	<1	4-Nitrophenol	<10
Benzyl alcohol	<1	Diethyl phthalate	<1
Bis(2-chloroisopropyl) ether	<1	Fluorene	<1
2-Methylphenol	<10	4-Chlorophenyl phenyl ether	<1
Hexachloroethane	<1	N-Nitrosodiphenylamine	<1
N-Nitroso-di-n-propylamine	<1	4-Nitroaniline	<10
4-Methylphenol	<10	4,6-Dinitro-2-methylphenol	<30
Nitrobenzene	<1	4-Bromophenyl phenyl ether	<1
Isophorone	<1	Hexachlorobenzene	<1
2-Nitrophenol	<10	Pentachlorophenol	<10
2,4-Dimethylphenol	<10	Phenanthrene	<1
Benzoic acid	<100	Anthracene	<1
Bis(2-chloroethoxy)methane	<1	Carbazole	<1
2,4-Dichlorophenol	<10	Di-n-butyl phthalate	<1
1,2,4-Trichlorobenzene	<1	Fluoranthene	<1
Naphthalene	<1	Pyrene	<1
Hexachlorobutadiene	<1	Benzyl butyl phthalate	<1
4-Chloroaniline	<3	Benz(a)anthracene	<1
4-Chloro-3-methylphenol	<10	Chrysene	<1
2-Methylnaphthalene	<1	Bis(2-ethylhexyl) phthalate	<10
Hexachlorocyclopentadiene	<3	Di-n-octyl phthalate	<1
2,4,6-Trichlorophenol	<10	Benzo(a)pyrene	<1
2,4,5-Trichlorophenol	<10	Benzo(b)fluoranthene	<1
2-Chloronaphthalene	<1	Benzo(k)fluoranthene	<1
2-Nitroaniline	<1	Indeno(1,2,3-cd)pyrene	<1
Dimethyl phthalate	<1	Dibenz(a,h)anthracene	<1
Acenaphthylene	<1	Benzo(g,h,i)perylene	<1
2,6-Dinitrotoluene	<1		

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Semivolatile Compounds By EPA Method 8270C

Client Sample ID: Method Blank
Date Received: Not Applicable
Date Extracted: 11/20/07
Date Analyzed: 12/05/07
Matrix: Water
Units: ug/L (ppb)

Client: Evren Northwest, Inc.
Project: 521-07001-02, F&BI 711253
Lab ID: 071885mb
Data File: 120520:D
Instrument: GCMS3
Operator: YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	56	23	77
Phenol-d6	37	10	63
Nitrobenzene-d5	100	58	113
2-Fluorobiphenyl	96	57	111
2,4,6-Tribromophenol	54	40	105
Terphenyl-d14	97	34	129

Compounds:	Concentration ug/L (ppb)
Phenol	<10
Bis(2-chloroethyl) ether	<1
2-Chlorophenol	<10
1,3-Dichlorobenzene	<1
1,4-Dichlorobenzene	<1
1,2-Dichlorobenzene	<1
Benzyl alcohol	<1
Bis(2-chloroisopropyl) ether	<1
2-Methylphenol	<10
Hexachloroethane	<1
N-Nitroso-di-n-propylamine	<1
4-Methylphenol	<10
Nitrobenzene	<1
Isophorone	<1
2-Nitrophenol	<10
2,4-Dimethylphenol	<10
Benzoic acid	<100
Bis(2-chloroethoxy)methane	<1
2,4-Dichlorophenol	<10
1,2,4-Trichlorobenzene	<1
Naphthalene	<1
Hexachlorobutadiene	<1
4-Chloroaniline	<3
4-Chloro-3-methylphenol	<10
2-Methylnaphthalene	<1
Hexachlorocyclopentadiene	<3
2,4,6-Trichlorophenol	<10
2,4,5-Trichlorophenol	<10
2-Chloronaphthalene	<1
2-Nitroaniline	<1
Dimethyl phthalate	<1
Acenaphthylene	<1
2,6-Dinitrotoluene	<1

Compounds:	Concentration ug/L (ppb)
3-Nitroaniline	<3
Acenaphthene	<1
2,4-Dinitrophenol	<30
Dibenzofuran	<1
2,4-Dinitrotoluene	<1
4-Nitrophenol	<10
Diethyl phthalate	<1
Fluorene	<1
4-Chlorophenyl phenyl ether	<1
N-Nitrosodiphenylamine	<1
4-Nitroaniline	<10
4,6-Dinitro-2-methylphenol	<30
4-Bromophenyl phenyl ether	<1
Hexachlorobenzene	<1
Pentachlorophenol	<10
Phenanthrene	<1
Anthracene	<1
Carbazole	<1
Di-n-butyl phthalate	<1
Fluoranthene	<1
Pyrene	<1
Benzyl butyl phthalate	<1
Benz(a)anthracene	<1
Chrysene	<1
Bis(2-ethylhexyl) phthalate	<10
Di-n-octyl phthalate	<1
Benzo(a)pyrene	<1
Benzo(b)fluoranthene	<1
Benzo(k)fluoranthene	<1
Indeno(1,2,3-cd)pyrene	<1
Dibenz(a,h)anthracene	<1
Benzo(g,h,i)perylene	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 12/13/07
Date Received: 11/19/07
Project: 521-07001-02, F&BI 711253
Date Extracted: 11/20/07
Date Analyzed: 11/27/07

**RESULTS FROM THE ANALYSIS OF WATER SAMPLES
FOR PCBs AS AROCLORS
USING EPA METHOD 8082**
Results Reported as ug/L (ppb)

<u>Sample ID</u> Laboratory ID	Aroclor								Surrogate
	<u>1221</u>	<u>1232</u>	<u>1016</u>	<u>1242</u>	<u>1248</u>	<u>1254</u>	<u>1260</u>	<u>1262</u>	<u>(% Rec.)</u> (Limit 50-150)
SP01-071116 711253-01	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	63
Method Blank	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	60

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 12/13/07

Date Received: 11/19/07

Project: 521-07001-02, F&BI 711253

**QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER
SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS
DIESEL EXTENDED USING METHOD NWTPH-Dx**

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Diesel Extended	ug/L (ppb)	2,500	94	114	70-130	19

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 12/13/07

Date Received: 11/19/07

Project: 521-07001-02, F&BI 711253

**QUALITY ASSURANCE RESULTS
FROM THE ANALYSIS OF WATER SAMPLES FOR
TOTAL SUSPENDED SOLIDS
BY METHOD 2540D**

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
TSS	mg/L	50	97	102	71-130	5

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 12/13/07

Date Received: 11/19/07

Project: 521-07001-02, F&BI 711253

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR SEMIVOLATILES BY EPA METHOD 8270C

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Phenol	ug/L (ppb)	75	40	44	19-51	10
2-Chlorophenol	ug/L (ppb)	75	87	91	54-104	4
1,4-Dichlorobenzene	ug/L (ppb)	50	88	91	48-108	3
Benzyl alcohol	ug/L (ppb)	50	76	80	43-107	5
N-Nitroso-di-n-propylamine	ug/L (ppb)	50	85	88	56-115	3
1,2,4-Trichlorobenzene	ug/L (ppb)	50	88	89	53-107	1
Naphthalene	ug/L (ppb)	50	102	104	57-109	2
4-Chloroaniline	ug/L (ppb)	50	70	72	11-144	3
4-Chloro-3-methylphenol	ug/L (ppb)	75	89	92	52-109	3
2-Methylnaphthalene	ug/L (ppb)	50	98	99	48-128	1
2-Nitroaniline	ug/L (ppb)	50	99	103	55-123	4
Acenaphthylene	ug/L (ppb)	50	110	114	55-116	4
3-Nitroaniline	ug/L (ppb)	50	76	80	10-263	5
Acenaphthene	ug/L (ppb)	50	106	110	26-127	4
Dibenzofuran	ug/L (ppb)	50	97	100	50-131	3
2,4-Dinitrotoluene	ug/L (ppb)	50	92	95	58-121	3
4-Nitrophenol	ug/L (ppb)	75	43	49	10-75	13
Fluorene	ug/L (ppb)	50	108	111	57-119	3
4-Nitroaniline	ug/L (ppb)	50	97	101	43-173	4
Pentachlorophenol	ug/L (ppb)	75	66	71	16-122	7
Phenanthrene	ug/L (ppb)	50	105	109	58-114	4
Anthracene	ug/L (ppb)	50	107	112	56-115	5
Fluoranthene	ug/L (ppb)	50	110	114 vo	56-113	4
Pyrene	ug/L (ppb)	50	107	111	51-111	4
Benz(a)anthracene	ug/L (ppb)	50	102	104	55-117	2
Chrysene	ug/L (ppb)	50	103	108	39-125	5
Benzo(a)pyrene	ug/L (ppb)	50	120 vo	124 vo	52-117	3
Benzo(b)fluoranthene	ug/L (ppb)	50	103	105	50-113	2
Benzo(k)fluoranthene	ug/L (ppb)	50	121	121	57-133	0
Indeno(1,2,3-cd)pyrene	ug/L (ppb)	50	115	120	40-135	4
Dibenz(a,h)anthracene	ug/L (ppb)	50	101	105	46-135	4
Benzo(g,h,i)perylene	ug/L (ppb)	50	105	108	48-143	3

Note: The initial calibration verification result for benzo(k)fluoranthene exceeded 15% deviation. The average deviation for all compounds was not greater than 15%; therefore, the initial calibration is considered valid.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 12/13/07

Date Received: 11/19/07

Project: 521-07001-02, F&BI 711253

**QUALITY ASSURANCE RESULTS
FOR THE ANALYSIS OF WATER SAMPLES FOR POLYCHLORINATED
BIPHENYLS AS
AROCOR 1016/1260 BY EPA METHOD 8082**

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	% Recovery LCS	% Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Aroclor 1016	ug/L (ppb)	2.5	93	85	52-135	9
Aroclor 1260	ug/L (ppb)	2.5	72	82	60-128	13

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Data Qualifiers & Definitions

a - The analyte was detected at a level less than five times the reporting limit. The RPD results may not provide reliable information on the variability of the analysis.

A1 - More than one compound of similar molecule structure was identified with equal probability.

b - The analyte was spiked at a level that was less than five times that present in the sample. Matrix spike recoveries may not be meaningful.

ca - The calibration results for this range fell outside of acceptance criteria. The value reported is an estimate.

c - The presence of the analyte indicated may be due to carryover from previous sample injections.

d - The sample was diluted. Detection limits may be raised due to dilution.

ds - The sample was diluted. Detection limits are raised due to dilution and surrogate recoveries may not be meaningful.

dv - Insufficient sample was available to achieve normal reporting limits and limits are raised accordingly.

fb - The analyte indicated was found in the method blank. The result should be considered an estimate.

fc - The compound is a common laboratory and field contaminant.

fp - Compounds in the sample matrix interfered with quantitation of the analyte. The reported concentration may be a false positive.

hr - The sample and duplicate were reextracted and reanalyzed. RPD results were still outside of control limits. The variability is attributed to sample inhomogeneity.

ht - The sample was extracted outside of holding time. Results should be considered estimates.

ip - Recovery fell outside of normal control limits. Compounds in the sample matrix interfered with the quantitation of the analyte.

j - The result is below normal reporting limits. The value reported is an estimate.

J - The internal standard associated with the analyte is out of control limits. The reported concentration is an estimate.

jl - The analyte result in the laboratory control sample is out of control limits. The reported concentration should be considered an estimate.

jr - The rpd result in laboratory control sample associated with the analyte is out of control limits. The reported concentration should be considered an estimate.

lc - The presence of the compound indicated is likely due to laboratory contamination.

L - The reported concentration was generated from a library search.

nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.

pc - The sample was received in a container not approved by the method. The value reported should be considered an estimate.

pr - The sample was received with incorrect preservation. The value reported should be considered an estimate.

ve - The value reported exceeded the calibration range established for the analyte. The reported concentration should be considered an estimate.


vo - The value reported fell outside the control limits established for this analyte.

x - The pattern of peaks present is not indicative of diesel.

y - The pattern of peaks present is not indicative of motor oil.



Source: USGS Topographic Map, 7.5-Minute Portland Quadrangle, 1990

	<p>Date Drawn: 4/16/2007 CAD File Name: 521-07001-01.svmap.doc Drawn By: LDG Approved By: NMW</p>	<p>Fred Devine Diving & Salvage Co. 6211 N. Ensign Street Portland Oregon For: The Marine Salvage Consortium, Inc.</p>	<p>Site Vicinity Map</p>	<p>Project No. 521-07001-01 Figure No. 1</p>
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~~17400 SW Upper Boones Ferry Road • Suite 270 • Portland, OR 97224 • (503) 670-8520 • FAX (503) 670-9243~~

CHAIN OF CUSTODY

[illegible]

Environmental Services Laboratory Inc

~~17400 SW Upper Boones Ferry Road • Suite 270 • Portland, OR 97224 • (503) 670-8520 • FAX (503) 670-9243~~

CHAIN OF CUSTODY

[illegible]

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Charlene Morrow, M.S.
Yelena Aravkina, M.S.
Bradley T. Benson, B.S.
Kurt Johnson, B.S.

3012 16th Avenue West
Seattle, WA 98119-2029
TEL: (206) 285-8282
FAX: (206) 283-5044
e-mail: fbi@isomedia.com

January 8, 2008

Lynn Green, Project Manager
Evren Northwest, Inc.
PO Box 80747
Portland, OR 97280

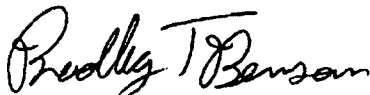
Dear Mr. Green:

Included are the results from the testing of material submitted on November 19, 2007 from the 521-07001-02 Fred Devine, F&BI 711253 project. There are 5 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

We appreciate this opportunity to be of service to you and hope you will call if you should have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.



Bradley T. Benson
Chemist

Enclosures

c: Neil Wohlers, Mike Krzeminski
ENW0108R.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

This case narrative encompasses samples received on November 19, 2007 by Friedman & Bruya, Inc. from the Evren Northwest, Inc. 521-07001-02 Fred Devine, F&BI 711253 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID
711253-01

Evren Northwest, Inc.
SP01-071116

All quality control requirements were acceptable.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 200.8

Client ID:	SP01-071116	Client:	Evren Northwest, Inc.
Date Received:	11/19/07	Project:	521-07001-02 Fred Devine
Date Extracted:	01/07/08	Lab ID:	711253-01
Date Analyzed:	01/07/08	Data File:	711253-01.044
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	hr

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	120	60	125
Indium	117	60	125
Bismuth	113	60	125

Analyte:	Concentration ug/L (ppb)
Chromium	1.92
Nickel	2.16
Copper	21.7
Zinc	321
Cadmium	<1
Lead	8.84

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 200.8

Client ID:	Method Blank	Client:	Evren Northwest, Inc.
Date Received:	Not Applicable	Project:	521-07001-02 Fred Devine
Date Extracted:	01/07/08	Lab ID:	I7-493 mb
Date Analyzed:	01/07/08	Data File:	I7-493 mb.008
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	hr

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	104	60	125
Indium	102	60	125
Bismuth	102	60	125

Analyte:	Concentration ug/L (ppb)
Chromium	<1
Nickel	<1
Copper	<1
Zinc	<1
Cadmium	<1
Lead	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 01/08/08

Date Received: 11/19/07

Project: 521-07001-02 Fred Devine, F&BI 711253

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR TOTAL METALS USING EPA METHOD 200.8

Laboratory Code: 801049-13 (Duplicate)

Analyte	Reporting Units	Sample Result	Duplicate Result	Relative Percent Difference	Acceptance Criteria
Chromium	ug/L (ppb)	1.23	1.11	10	0-20
Nickel	ug/L (ppb)	4.39	3.95	11	0-20
Copper	ug/L (ppb)	<1	<1	nm	0-20
Zinc	ug/L (ppb)	1.82	1.50	19	0-20
Cadmium	ug/L (ppb)	<1	<1	nm	0-20
Lead	ug/L (ppb)	<1	<1	nm	0-20

Laboratory Code: 801049-13 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Acceptance Criteria
Chromium	ug/L (ppb)	20	1.23	84	50-150
Nickel	ug/L (ppb)	20	4.39	76 b	50-150
Copper	ug/L (ppb)	20	<1	77	50-150
Zinc	ug/L (ppb)	50	1.82	83	50-150
Cadmium	ug/L (ppb)	5	<1	98	50-150
Lead	ug/L (ppb)	10	<1	103	50-150

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Chromium	ug/L (ppb)	20	102	70-130
Nickel	ug/L (ppb)	20	103	70-130
Copper	ug/L (ppb)	20	103	70-130
Zinc	ug/L (ppb)	50	104	70-130
Cadmium	ug/L (ppb)	5	108	70-130
Lead	ug/L (ppb)	10	103	70-130

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Data Qualifiers & Definitions

a - The analyte was detected at a level less than five times the reporting limit. The RPD results may not provide reliable information on the variability of the analysis.

A1 - More than one compound of similar molecule structure was identified with equal probability.

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ca - The calibration results for this range fell outside of acceptance criteria. The value reported is an estimate.

c - The presence of the analyte indicated may be due to carryover from previous sample injections.

d - The sample was diluted. Detection limits may be raised due to dilution.

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hr - The sample and duplicate were reextracted and reanalyzed. RPD results were still outside of control limits. The variability is attributed to sample inhomogeneity.

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jl - The analyte result in the laboratory control sample is out of control limits. The reported concentration should be considered an estimate.

jr - The rpd result in laboratory control sample associated with the analyte is out of control limits. The reported concentration should be considered an estimate.

js - The surrogate associated with the analyte is out of control limits. The reported concentration should be considered an estimate.

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L - The reported concentration was generated from a library search.

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pr - The sample was received with incorrect preservation. The value reported should be considered an estimate.

ve - The value reported exceeded the calibration range established for the analyte. The reported concentration should be considered an estimate.

vo - The value reported fell outside the control limits established for this analyte.

x - The pattern of peaks present is not indicative of diesel.

y - The pattern of peaks present is not indicative of motor oil.

Send Report To LYNN D. GREEN
Company EYREN NORTHWEST, INC.
Address PO BOX 80747
City, State, ZIP PORTLAND, OR 97280-1747
Phone # (503)452-5561 Fax # (503)452-7669

SAMPLE CHAIN OF CUSTODY



ME 11/29/07

AI6/BO4

SAMPLERS (signature) <i>[Signature]</i>		Page # <i>1</i> of <i>1</i>
PROJECT NAME/NO. Fred Dawne Sulvey Sal-07001-01	PO #	TURNAROUND TIME <input checked="" type="checkbox"/> Standard (2 Weeks) <input type="checkbox"/> RUSH Rush charges authorized by:
REMARKS Hi-res for all Analyses		SAMPLE DISPOSAL <input type="checkbox"/> Dispose after 30 days <input type="checkbox"/> Return samples <input type="checkbox"/> Will call with instructions

[illegible]

Friedman & Bruya, Inc.
3012 16th Avenue West
Seattle, WA 98119-2029
Ph. (206) 285-8282
Fax (206) 283-5044

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by: 	Mike Krzeminski	ENW	11/28/07	1530
Received by: 	Nham Phan	FEBI	11/29/07	11:00
Relinquished by:				
Received by:				

Samples received at 4 °C

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Charlene Morrow, M.S.
Yelena Aravkina, M.S.
Bradley T. Benson, B.S.
Kurt Johnson, B.S.

3012 16th Avenue West
Seattle, WA 98119-2029
TEL: (206) 285-8282
FAX: (206) 283-5044
e-mail: fbi@isomedia.com

December 17, 2007

Lynn Green, Project Manager
Evren Northwest, Inc.
PO Box 80747
Portland, OR 97280


Dear Mr. Green:

Included are the results from the testing of material submitted on November 29, 2007 from the Fred Devine Salvage 521-07001-01, F&BI 711369 project. There are 17 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

We appreciate this opportunity to be of service to you and hope you will call if you should have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.



Bradley T. Benson
Chemist

Enclosures

c: Neil Wohlers, Mike Krzeminski
ENW1217R.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

This case narrative encompasses samples received on November 29, 2007 by Friedman & Bruya, Inc. from the Evren Northwest, Inc. 521-07001-01, F&BI 711369 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID
711369-01

Evren Northwest, Inc.
SP-1

The 8270C surrogate Nitrobenzene-d5 exceeded the laboratory acceptance criteria. No compounds associated with this surrogate were detected, therefore the data is acceptable. The 8270C 4-chloroaniline relative percent difference for the laboratory control spike failed the acceptance criteria. The compound was not detected in the samples, therefore the data is acceptable.

The 8082 method blank surrogate failed below the acceptance criteria. The data is flagged accordingly. The 8082 Aroclor 1016 relative percent difference for the laboratory control spike failed the acceptance criteria. The compound was not detected in the samples, therefore the data is acceptable.

All other quality control requirements were acceptable.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 12/17/07
Date Received: 11/29/07
Project: 521-07001-01, F&BI 711369
Date Extracted: 11/29/07
Date Analyzed: 12/04/07

**RESULTS FROM THE ANALYSIS OF THE WATER SAMPLES
FOR TOTAL PETROLEUM HYDROCARBONS AS
DIESEL AND RESIDUAL RANGE
USING METHOD NWTPH-Dx
Results Reported as ug/L (ppb)**

<u>Sample ID</u> Laboratory ID	<u>Diesel Range</u> (C ₁₀ -C ₂₅)	<u>Residual Range</u> (C ₂₅ -C ₃₆)	<u>Surrogate</u> (% Recovery) (Limit 51-132)
SP-1 711369-01	650	1,100	75
Method Blank	<50	<250	76

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 200.8

Client ID:	SP-1	Client:	Evren Northwest, Inc.
Date Received:	11/29/07	Project:	521-07001-01, F&BI 711369
Date Extracted:	12/06/07	Lab ID:	711369-01
Date Analyzed:	12/07/07	Data File:	711369-01.010
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	HR

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	98	60	125
Indium	89	60	125
Bismuth	99	60	125

Analyte:	Concentration ug/L (ppb)
Chromium	5.32
Nickel	5.22
Copper	74.1
Zinc	457
Cadmium	1.34
Lead	25.4

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 200.8

Client ID:	Method Blank	Client:	Evren Northwest, Inc.
Date Received:	NA	Project:	521-07001-01, F&BI 711369
Date Extracted:	12/06/07	Lab ID:	I7-459 mb
Date Analyzed:	12/07/07	Data File:	I7-459 mb.008
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	HR

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	104	60	125
Indium	102	60	125
Bismuth	105	60	125

Analyte:	Concentration ug/L (ppb)
Chromium	<1
Nickel	<1
Copper	<1
Zinc	<1
Cadmium	<1
Lead	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Semivolatile Compounds By EPA Method 8270C SIM

Client Sample ID:	SP-1	Client:	Evren Northwest, Inc.
Date Received:	11/29/07	Project:	521-07001-01, F&BI 711369
Date Extracted:	11/29/07	Lab ID:	711369-01
Date Analyzed:	12/06/07	Data File:	120529.D
Matrix:	Water	Instrument:	GCMS6
Units:	ug/L (ppb)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Anthracene-d10	90	50	150
Benzo(a)anthracene-d12	85	50	150

Compounds:	Concentration ug/L (ppb)
Naphthalene	0.15
Acenaphthylene	<0.05
Acenaphthene	<0.05
Fluorene	0.11
Phenanthrene	0.52
Anthracene	0.053
Fluoranthene	0.45
Pyrene	0.38
Benz(a)anthracene	0.14
Chrysene	0.30
Benzo(a)pyrene	0.15
Benzo(b)fluoranthene	0.26
Benzo(k)fluoranthene	0.081
Indeno(1,2,3-cd)pyrene	0.15
Dibenz(a,h)anthracene	<0.05
Benzo(g,h,i)perylene	0.15

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Semivolatile Compounds By EPA Method 8270C SIM

Client Sample ID:	Method Blank	Client:	Evren Northwest, Inc.
Date Received:	Not Applicable	Project:	521-07001-01, F&BI 711369
Date Extracted:	11/29/07	Lab ID:	071923mb2
Date Analyzed:	12/06/07	Data File:	120521.D
Matrix:	Water	Instrument:	GCMS6
Units:	ug/L (ppb)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Anthracene-d10	94	50	150
Benzo(a)anthracene-d12	83	50	150

Compounds:	Concentration ug/L (ppb)
Naphthalene	<0.05
Acenaphthylene	<0.05
Acenaphthene	<0.05
Fluorene	<0.05
Phenanthrene	<0.05
Anthracene	<0.05
Fluoranthene	<0.05
Pyrene	<0.05
Benz(a)anthracene	<0.05
Chrysene	<0.05
Benzo(a)pyrene	<0.05
Benzo(b)fluoranthene	<0.05
Benzo(k)fluoranthene	<0.05
Indeno(1,2,3-cd)pyrene	<0.05
Dibenz(a,h)anthracene	<0.05
Benzo(g,h,i)perylene	<0.05

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Semivolatile Compounds By EPA Method 8270C

Client Sample ID: SP-1
Date Received: 11/29/07
Date Extracted: 12/05/07
Date Analyzed: 12/06/07
Matrix: Water
Units: ug/L (ppb)

Client: Evren Northwest, Inc.
Project: 521-07001-01, F&BI 711369
Lab ID: 711369-01
Data File: 120608A.D
Instrument: GCMS3
Operator: YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	61	23	77
Phenol-d6	36	10	63
Nitrobenzene-d5	114 vo	58	113
2-Fluorobiphenyl	108	57	111
2,4,6-Tribromophenol	73	40	105
Terphenyl-d14	108	34	129

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Phenol	<5	3-Nitroaniline	<1.5
Bis(2-chloroethyl) ether	<0.5	Acenaphthene	<0.5
2-Chlorophenol	<5	2,4-Dinitrophenol	<15
1,3-Dichlorobenzene	<0.5	Dibenzofuran	<0.5
1,4-Dichlorobenzene	<0.5	2,4-Dinitrotoluene	<0.5
1,2-Dichlorobenzene	<0.5	4-Nitrophenol	<5
Benzyl alcohol	<0.5	Diethyl phthalate	<0.5
Bis(2-chloroisopropyl) ether	<0.5	Fluorene	<0.5
2-Methylphenol	<5	4-Chlorophenyl phenyl ether	<0.5
Hexachloroethane	<0.5	N-Nitrosodiphenylamine	<0.5
N-Nitroso-di-n-propylamine	<0.5	4-Nitroaniline	<5
4-Methylphenol	<5	4,6-Dinitro-2-methylphenol	<15
Nitrobenzene	<0.5	4-Bromophenyl phenyl ether	<0.5
Isophorone	<0.5	Hexachlorobenzene	<0.5
2-Nitrophenol	<5	Pentachlorophenol	<5
2,4-Dimethylphenol	<5	Phenanthrene	<0.5
Benzoic acid	<50	Anthracene	<0.5
Bis(2-chloroethoxy)methane	<0.5	Carbazole	<0.5
2,4-Dichlorophenol	<5	Di-n-butyl phthalate	<0.5
1,2,4-Trichlorobenzene	<0.5	Fluoranthene	<0.5
Naphthalene	<0.5	Pyrene	<0.5
Hexachlorobutadiene	<0.5	Benzyl butyl phthalate	0.59
4-Chloroaniline	<1.5	Benz(a)anthracene	<0.5
4-Chloro-3-methylphenol	<5	Chrysene	<0.5
2-Methylnaphthalene	<0.5	Bis(2-ethylhexyl) phthalate	2.9
Hexachlorocyclopentadiene	<1.5	Di-n-octyl phthalate	<0.5
2,4,6-Trichlorophenol	<5	Benzo(a)pyrene	<0.5
2,4,5-Trichlorophenol	<5	Benzo(b)fluoranthene	<0.5
2-Chloronaphthalene	<0.5	Benzo(k)fluoranthene	<0.5
2-Nitroaniline	<0.5	Indeno(1,2,3-cd)pyrene	<0.5
Dimethyl phthalate	<0.5	Dibenz(a,h)anthracene	<0.5
Acenaphthylene	<0.5	Benzo(g,h,i)perylene	<0.5
2,6-Dinitrotoluene	<0.5		

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Semivolatile Compounds By EPA Method 8270C

Client Sample ID: Method Blank
Date Received: Not Applicable
Date Extracted: 12/05/07
Date Analyzed: 12/06/07
Matrix: Water
Units: ug/L (ppb)

Client: Evren Northwest, Inc.
Project: 521-07001-01, F&BI 711369
Lab ID: 071962mb
Data File: 120607.D
Instrument: GCMS3
Operator: YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	52	23	77
Phenol-d6	32	10	63
Nitrobenzene-d5	96	58	113
2-Fluorobiphenyl	91	57	111
2,4,6-Tribromophenol	56	40	105
Terphenyl-d14	96	34	129

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Phenol	<5	3-Nitroaniline	<1.5
Bis(2-chloroethyl) ether	<0.5	Acenaphthene	<0.5
2-Chlorophenol	<5	2,4-Dinitrophenol	<15
1,3-Dichlorobenzene	<0.5	Dibenzofuran	<0.5
1,4-Dichlorobenzene	<0.5	2,4-Dinitrotoluene	<0.5
1,2-Dichlorobenzene	<0.5	4-Nitrophenol	<5
Benzyl alcohol	<0.5	Diethyl phthalate	<0.5
Bis(2-chloroisopropyl) ether	<0.5	Fluorene	<0.5
2-Methylphenol	<5	4-Chlorophenyl phenyl ether	<0.5
Hexachloroethane	<0.5	N-Nitrosodiphenylamine	<0.5
N-Nitroso-di-n-propylamine	<0.5	4-Nitroaniline	<5
4-Methylphenol	<5	4,6-Dinitro-2-methylphenol	<15
Nitrobenzene	<0.5	4-Bromophenyl phenyl ether	<0.5
Isophorone	<0.5	Hexachlorobenzene	<0.5
2-Nitrophenol	<5	Pentachlorophenol	<5
2,4-Dimethylphenol	<5	Phenanthrene	<0.5
Benzoic acid	<50	Anthracene	<0.5
Bis(2-chloroethoxy)methane	<0.5	Carbazole	<0.5
2,4-Dichlorophenol	<5	Di-n-butyl phthalate	<0.5
1,2,4-Trichlorobenzene	<0.5	Fluoranthene	<0.5
Naphthalene	<0.5	Pyrene	<0.5
Hexachlorobutadiene	<0.5	Benzyl butyl phthalate	<0.5
4-Chloroaniline	<1.5	Benz(a)anthracene	<0.5
4-Chloro-3-methylphenol	<5	Chrysene	<0.5
2-Methylnaphthalene	<0.5	Bis(2-ethylhexyl) phthalate	<0.5
Hexachlorocyclopentadiene	<1.5	Di-n-octyl phthalate	<0.5
2,4,6-Trichlorophenol	<5	Benzo(a)pyrene	<0.5
2,4,5-Trichlorophenol	<5	Benzo(b)fluoranthene	<0.5
2-Chloronaphthalene	<0.5	Benzo(k)fluoranthene	<0.5
2-Nitroaniline	<0.5	Indeno(1,2,3-cd)pyrene	<0.5
Dimethyl phthalate	<0.5	Dibenz(a,h)anthracene	<0.5
Acenaphthylene	<0.5	Benzo(g,h,i)perylene	<0.5
2,6-Dinitrotoluene	<0.5		

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 12/17/07

Date Received: 11/29/07

Project: 521-07001-01, F&BI 711369

Date Analyzed: 12/05/07

**RESULTS FROM THE ANALYSIS OF WATER SAMPLES
FOR TOTAL SUSPENDED SOLIDS
BY METHOD 2540D**

Results Reported as mg/L (ppm)

<u>Sample ID</u> Laboratory ID	Total Suspended <u>Solids</u>
SP-1 711369-01	43.6
Method Blank	<10

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 12/17/07
Date Received: 11/29/07
Project: 521-07001-01, F&BI 711369
Date Extracted: 12/05/07
Date Analyzed: 12/07/07

**RESULTS FROM THE ANALYSIS OF WATER SAMPLES
FOR PCBs AS AROCLORS
USING EPA METHOD 8082**
Results Reported as µg/L (ppb)

<u>Sample ID</u> Laboratory ID	Aroclor								Surrogate
	<u>1221</u>	<u>1232</u>	<u>1016</u>	<u>1242</u>	<u>1248</u>	<u>1254</u>	<u>1260</u>	<u>1262</u>	<u>(% Rec.)</u> (Limit 61-132)
SP-1 711369-01	<0.07	<0.07	<0.07	<0.07	<0.07	<0.07	<0.07	<0.07	87
Method Blank	<0.07	<0.07	<0.07	<0.07	<0.07	<0.07	<0.07	<0.07	36 vo

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 12/17/07

Date Received: 11/29/07

Project: 521-07001-01, F&BI 711369

**QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER
SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS
DIESEL EXTENDED USING METHOD NWTPH-Dx**

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Diesel Extended	ug/L (ppb)	2,500	88	82	67-141	7

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 12/17/07

Date Received: 11/29/07

Project: 521-07001-01, F&BI 711369

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF **WATER** SAMPLES FOR TOTAL METALS USING EPA METHOD 200.8

Laboratory Code: 711384-02 (Duplicate)

Analyte	Reporting Units	Sample Result	Duplicate Result	Relative Percent Difference	Acceptance Criteria
Chromium	ug/L (ppb)	<1	<1	nm	0-20
Nickel	ug/L (ppb)	1.16	1.22	5	0-20
Copper	ug/L (ppb)	43.0	42.8	0	0-20
Zinc	ug/L (ppb)	29.9	30.2	1	0-20
Cadmium	ug/L (ppb)	<1	<1	nm	0-20
Lead	ug/L (ppb)	<1	<1	nm	0-20

Laboratory Code: 711384-02 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Acceptance Criteria
Chromium	ug/L (ppb)	20	<1	104	50-150
Nickel	ug/L (ppb)	20	1.16	99	50-150
Copper	ug/L (ppb)	20	43.0	82 b	50-150
Zinc	ug/L (ppb)	50	29.9	96 b	50-150
Cadmium	ug/L (ppb)	5	<1	103	50-150
Lead	ug/L (ppb)	10	<1	105	50-150

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Chromium	ug/L (ppb)	20	106	70-130
Nickel	ug/L (ppb)	20	102	70-130
Copper	ug/L (ppb)	20	103	70-130
Zinc	ug/L (ppb)	50	93	70-130
Cadmium	ug/L (ppb)	5	98	70-130
Lead	ug/L (ppb)	10	104	70-130

FRIEDMAN & BRUYA, INC.**ENVIRONMENTAL CHEMISTS**

Date of Report: 12/17/07

Date Received: 11/29/07

Project: 521-07001-01, F&BI 711369

**QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER
SAMPLES FOR PNA'S BY EPA METHOD 8270C SIM**

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Naphthalene	ug/L (ppb)	5	86	89	70-130	3
Acenaphthylene	ug/L (ppb)	5	88	92	70-130	4
Acenaphthene	ug/L (ppb)	5	87	91	70-130	4
Fluorene	ug/L (ppb)	5	86	88	70-130	2
Phenanthrene	ug/L (ppb)	5	87	90	70-130	3
Anthracene	ug/L (ppb)	5	84	89	70-130	6
Fluoranthene	ug/L (ppb)	5	88	92	70-130	4
Pyrene	ug/L (ppb)	5	88	92	70-130	4
Benz(a)anthracene	ug/L (ppb)	5	84	89	70-130	6
Chrysene	ug/L (ppb)	5	88	93	70-130	6
Benzo(b)fluoranthene	ug/L (ppb)	5	99	100	70-130	1
Benzo(k)fluoranthene	ug/L (ppb)	5	87	92	70-130	6
Benzo(a)pyrene	ug/L (ppb)	5	90	94	70-130	4
Indeno(1,2,3-cd)pyrene	ug/L (ppb)	5	95	97	70-130	2
Dibenz(a,h)anthracene	ug/L (ppb)	5	91	95	70-130	4
Benzo(g,h,i)perylene	ug/L (ppb)	5	91	93	70-130	2

Note: The initial calibration verification result for anthracene-d10 exceeded 15% deviation. The average deviation for all compounds was not greater than 15%; therefore, the initial calibration is considered valid.

Note: The calibration verification result for anthracene-d10 exceeded 15% deviation. The average deviation for all compounds was not greater than 15%; therefore, the initial calibration is considered valid.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 12/17/07

Date Received: 11/29/07

Project: 521-07001-01, F&BI 711369

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR SEMIVOLATILES BY EPA METHOD 8270C

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Phenol	ug/L (ppb)	75	32	29	19-51	10
2-Chlorophenol	ug/L (ppb)	75	71	68	54-104	4
1,4-Dichlorobenzene	ug/L (ppb)	50	63	67	48-108	6
Benzyl alcohol	ug/L (ppb)	50	67	61	43-107	9
N-Nitroso-di-n-propylamine	ug/L (ppb)	50	74	67	56-115	10
1,2,4-Trichlorobenzene	ug/L (ppb)	50	63	66	53-107	5
Naphthalene	ug/L (ppb)	50	83	80	57-109	4
4-Chloroaniline	ug/L (ppb)	50	44	35	11-144	23 vo
4-Chloro-3-methylphenol	ug/L (ppb)	75	78	73	52-109	7
2-Methylnaphthalene	ug/L (ppb)	50	78	77	48-128	1
2-Nitroaniline	ug/L (ppb)	50	86	77	55-123	11
Acenaphthylene	ug/L (ppb)	50	93	85	55-116	9
3-Nitroaniline	ug/L (ppb)	50	65	56	10-263	15
Acenaphthene	ug/L (ppb)	50	91	82	26-127	10
Dibenzofuran	ug/L (ppb)	50	83	75	50-131	10
2,4-Dinitrotoluene	ug/L (ppb)	50	82	72	58-121	13
4-Nitrophenol	ug/L (ppb)	75	38	34	10-75	11
Fluorene	ug/L (ppb)	50	94	85	57-119	10
4-Nitroaniline	ug/L (ppb)	50	81	71	43-173	13
Pentachlorophenol	ug/L (ppb)	75	76	65	16-122	16
Phenanthrene	ug/L (ppb)	50	94	84	58-114	11
Anthracene	ug/L (ppb)	50	96	86	56-115	11
Fluoranthene	ug/L (ppb)	50	97	87	56-113	11
Pyrene	ug/L (ppb)	50	97	87	51-111	11
Benz(a)anthracene	ug/L (ppb)	50	90	81	55-117	11
Chrysene	ug/L (ppb)	50	94	84	39-125	11
Benzo(a)pyrene	ug/L (ppb)	50	108	95	52-117	13
Benzo(b)fluoranthene	ug/L (ppb)	50	77	67	50-113	14
Benzo(k)fluoranthene	ug/L (ppb)	50	103	102	57-133	1
Indeno(1,2,3-cd)pyrene	ug/L (ppb)	50	107	95	40-135	12
Dibenz(a,h)anthracene	ug/L (ppb)	50	95	85	46-135	11
Benzo(g,h,i)perylene	ug/L (ppb)	50	98	87	48-143	12

Note: The initial calibration verification result for benzo(k)fluoranthene exceeded 15% deviation. The average deviation for all compounds was not greater than 15%; therefore, the initial calibration is considered valid.

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ENVIRONMENTAL CHEMISTS

Date of Report: 12/17/07

Date Received: 11/29/07

Project: 521-07001-01, F&BI 711369

**QUALITY ASSURANCE RESULTS
FROM THE ANALYSIS OF WATER SAMPLES FOR
TOTAL SUSPENDED SOLIDS
BY METHOD 2540D**

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
TSS	mg/L	50	105	96	71-130	9

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 12/17/07

Date Received: 11/29/07

Project: 521-07001-01, F&BI 711369

**QUALITY ASSURANCE RESULTS
FOR THE ANALYSIS OF WATER SAMPLES FOR POLYCHLORINATED
BIPHENYLS AS
AROCOR 1016/1260 BY EPA METHOD 8082**

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	% Recovery LCS	% Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Aroclor 1016	µg/L (ppb)	2.5	74	60	52-135	21 vo
Aroclor 1260	µg/L (ppb)	2.5	87	81	60-128	7

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ENVIRONMENTAL CHEMISTS

Data Qualifiers & Definitions

- a - The analyte was detected at a level less than five times the reporting limit. The RPD results may not provide reliable information on the variability of the analysis.
- A1 - More than one compound of similar molecule structure was identified with equal probability.
- b - The analyte was spiked at a level that was less than five times that present in the sample. Matrix spike recoveries may not be meaningful.
- ca - The calibration results for this range fell outside of acceptance criteria. The value reported is an estimate.
- c - The presence of the analyte indicated may be due to carryover from previous sample injections.
- d - The sample was diluted. Detection limits may be raised due to dilution.
- ds - The sample was diluted. Detection limits are raised due to dilution and surrogate recoveries may not be meaningful.
- dv - Insufficient sample was available to achieve normal reporting limits and limits are raised accordingly.
- fb - The analyte indicated was found in the method blank. The result should be considered an estimate.
- fc - The compound is a common laboratory and field contaminant.
- fp - Compounds in the sample matrix interfered with quantitation of the analyte. The reported concentration may be a false positive.
- hr - The sample and duplicate were reextracted and reanalyzed. RPD results were still outside of control limits. The variability is attributed to sample inhomogeneity.
- ht - The sample was extracted outside of holding time. Results should be considered estimates.
- ip - Recovery fell outside of normal control limits. Compounds in the sample matrix interfered with the quantitation of the analyte.
- j - The result is below normal reporting limits. The value reported is an estimate.
- J - The internal standard associated with the analyte is out of control limits. The reported concentration is an estimate.
- jl - The analyte result in the laboratory control sample is out of control limits. The reported concentration should be considered an estimate.
- jr - The rpd result in laboratory control sample associated with the analyte is out of control limits. The reported concentration should be considered an estimate.
- lc - The presence of the compound indicated is likely due to laboratory contamination.
- L - The reported concentration was generated from a library search.
- nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.
- pc - The sample was received in a container not approved by the method. The value reported should be considered an estimate.
- pr - The sample was received with incorrect preservation. The value reported should be considered an estimate.
- ve - The value reported exceeded the calibration range established for the analyte. The reported concentration should be considered an estimate.
- vo - The value reported fell outside the control limits established for this analyte.
- x - The pattern of peaks present is not indicative of diesel.
- y - The pattern of peaks present is not indicative of motor oil.